

Symbols in Education



Contents

Introduction	1
Symbols Inclusion Project	2
What symbols are and why we use them	3
Uses of symbols	
Signposting the environment	4
Aiding communication and participation	5
Understanding routines and systems	6
Supporting new or unknown vocabulary	8
Supporting the teaching of concepts	9
Accessing the curriculum	10
Enabling pupils to explain their understanding	11
Supporting writing and recording	12
Helping to improve behaviour, motivation and engagement	13
Additional outcomes	
More children than expected benefited	14
Beyond school and into the wider community	15
Case Study 1 - An individual success	16
Case Study 1 - A whole school view of symbols	18
Widgit software, resources and advice	20



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Introduction

"The ability to communicate is an essential life skill for all children and young people and it underpins a child's social, emotional and educational development. Evidence illustrates that there is insufficient understanding of the centrality of speech, language and communication among policy makers and commissioners nationally and locally, professionals and service providers, and sometimes parents and families themselves. It follows that insufficient priority is attached to addressing SLCN."

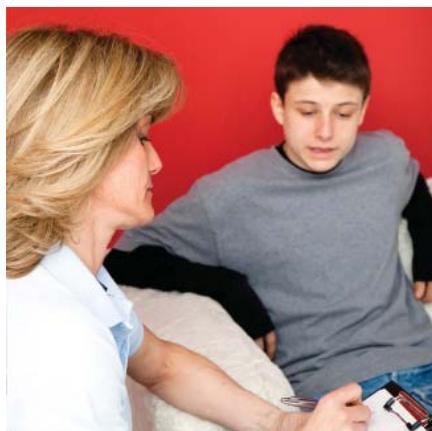
The Bercow Report 2008, Executive Summary.



"Laying the foundations for early language development is at the heart of a high quality early years experience, and is an area of development where many disabled children and children with SEN can require a different approach or additional support." (p32)

DfE (2011). 'Support and aspiration: A new approach to special educational needs and disability.' SEND Green Paper.

Symbols have been shown to help many children and young people in school who struggle with reading or understanding.



This pamphlet illustrates how symbols have been shown to support learning and communication for students in mainstream schools. It draws on the long-term experience of the Symbols Inclusion Project in Warwickshire.



Many of the examples are based on the experience of primary teachers across Warwickshire, many of whom have used symbols for 10 years in partnership with the Local Authority and Widgit, under the Symbols Inclusion Project.

This partnership found that the use of symbols helped teachers in improving behaviour and motivation, creating greater independence and giving access to the curriculum and learning. It also demonstrated that there is real benefit to the use of symbols in mainstream schools, in early years, and within the wider community. The Symbols Inclusion Project has provided many ideas and exemplars which have now been more widely used in other authorities.



Symbols Inclusion Project

The project started in 2002 to explore how a child who needed symbols could be included without being made to feel ‘special’. Initially the work focused around a specific child entering a mainstream infant school. Symbols were introduced into the whole classroom to support key vocabulary and activities to include this pupil.

“Symbols offered so much more than we expected.”

Within that class there were a number of other children who also benefited from the symbol support. Symbols and the strategies for using them spread throughout this school and two neighbouring schools.

Following this experience, Warwickshire Integrated Disability Service (IDS) initiated a six-month project with Widgit to study the impact of using symbols to help enable inclusion across the whole county. Under the project IDS seconded experienced staff to work with Widgit to develop training and materials and gather evidence of use.

Such was the success of the pilot that the Local Authority and Widgit decided to continue the project, initially for a further three years. Since then it has developed and continued. Symbols are available to every Warwickshire school and early years setting, and are being used in other environments such as the hospital, after-school clubs and leisure facilities. The project website has a large amount of information and examples.

www.symbolsinclusionproject.org

Some of the **key benefits** found include:

- improving behaviour and motivation
- creating greater independence
- giving access to the curriculum and learning
- most significantly, providing strategies to enable students to demonstrate what they know.

As one child asked: “I can’t think of the word. Can I draw a picture?”

The two case studies on pages 16-19 illustrate the experience of schools. The first looks at the long-term effects upon a pupil with communication difficulties, and the other the impact on the whole school.



What symbols are and why we use them

Symbols are images that represent words or concepts and help pupils visualise the meanings of words. Sometimes it is hard to remember the meanings of new and difficult vocabulary, and with symbols the pupil can be sure they are using the right word. They support pupils at many different levels.

At the simplest level, symbols are used to enable communication and choice – by pointing to the one you want. By signposting the environment, such as by labelling rooms, cupboards, and drawers the pupil is given help to be more independent. Symbols used to support vocabulary can help with learning new words and can separate understanding of concepts from decoding spelling. Most importantly, they can help pupils by increasing their independence and building their self-esteem.

The following pages gives more specific detail on the use of symbols. These include help to:

- signpost the environment
- aid communication and participation
- understand routines and systems
- support new or unknown vocabulary
- support teaching of concepts
- access the curriculum through differentiated materials
- enable pupils to explain their understanding of a concept or idea
- support writing and recording
- improve behaviour, motivation and engagement.

Additional outcomes are described on pages 14 - 15 and include:

- more pupils than expected benefited
- there are benefits to the use of symbols in the wider community beyond school.



Uses of Symbols

Signposting the environment

“Signposting the school environment makes pupils and visitors feel safe and more comfortable.”

A ‘Communication Friendly Environment’ is one where:

- everyone feels secure enough to listen, understand and express themselves
- learners can develop their social, emotional and academic potential by the reduction or removal of barriers to communication
- there is an accessible learning environment for everyone.

Symbols (and photographs) can be used to label resources and equipment, to show who works where, and provide visual aids to signpost people around the school.



Making symbols part of the environment helps students who need extra support and increases their feeling of inclusion.



Schools that use symbols as a natural part of the environment have found that many more people notice the signs, and there have been no negative comments from parents.



Uses of Symbols

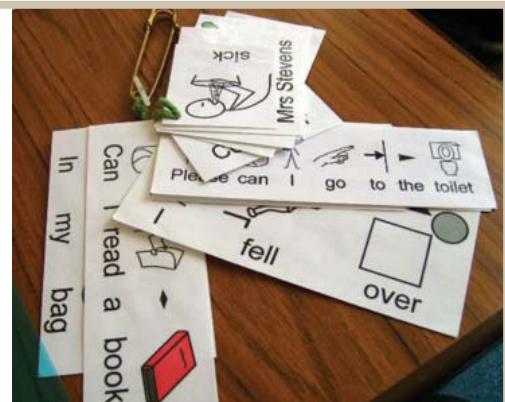
Aiding communication and participation

“Pupils with communication difficulties use symbols to participate. The symbols help staff understand a pupil’s needs and anxieties.”

Grids of symbols can be printed to allow a child with little or no language to express needs and wants by pointing. Examples include making choices at dinner time or in the choice of an activity at ‘choosing time’.

Grids can be sent home so that parents/carers can know and discuss what the child has done that day. The child would also have a visual reminder and would be able to indicate what they had done.

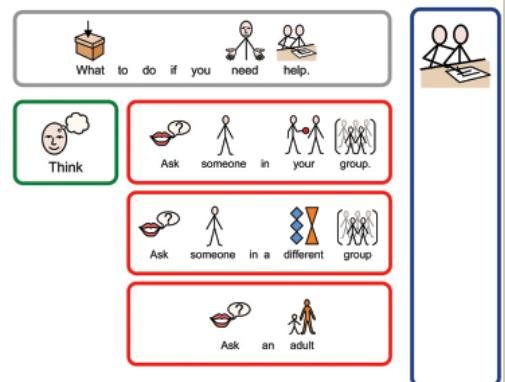
These communication cards were made for a specific child to help him express needs and views.



Activity cards for ‘choosing time’ support children’s understanding of the choices available to them.



Reminders and advice cards increase independence. A child can put the bookmark in an obvious place to request help without having to ask out loud.



Uses of Symbols

Understanding routines and systems

“Visual timetables, choice cards and planners help pupils understand what is expected and build self-confidence.”

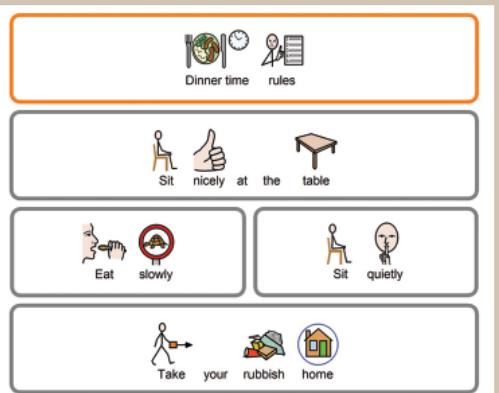
Knowing what is expected is vital for many young children. Symbol-supported timetables are effective for those who are not able to fully understand text or remember language but need to have an understanding of what is happening. Timetables using cut-up (laminated) symbol cards can be made to show the sequence of activities in a lesson, a morning, or a whole day. For older pupils it is possible to make weekly timetables on an A4 sheet.

Timetables can be made to show activities for all or part of the day using symbol cards. There are many examples of symbols used in visual timetables to help pupils understand what is happening during the day. This can increase pupil confidence.



Symbols can also be used to explain simple routines such as going to the toilet, washing hands, changing for PE, dinner time rules and the going home routine.

Older pupils benefit from having symbols to help explain the process for a science experiment or stages in a recipe.



Classroom rules and reminders with symbol support can be quicker to read and give more immediate information than the text-only equivalent.

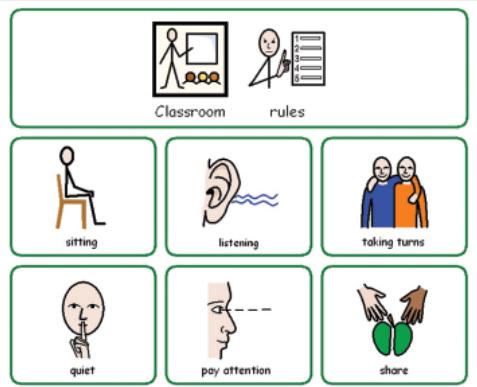
These class targets are highlighted with symbols for all the class.



Uses of Symbols

Understanding routines and systems

Classroom reminders and rules with symbols can give a quick visual prompt without intruding on the lesson flow.



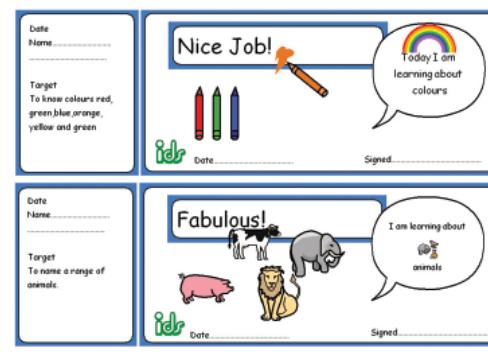
Behaviour prompt cards provide discreet reminders to an individual, helping to keep noise levels and intrusion down. A pupil can display a card on their table to quietly request help.



Self-monitoring behaviour cards engage the pupil in evaluating their own progress. Symbols can enhance rewards and teacher feedback.



This example of a feedback 'chequebook' provides pupils with a certificate reminding them of their achievements which can be taken home. There is a portion that the teacher can retain as a record.



Uses of Symbols

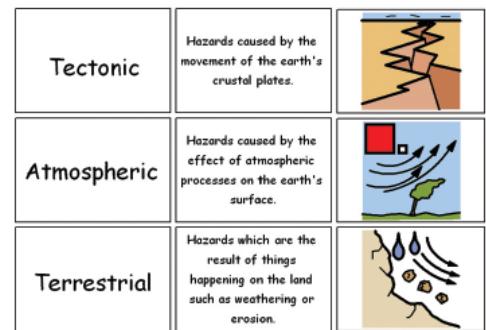
Supporting new or unknown vocabulary

“Symbols help pupils learn subject-specific vocabulary, particularly those with poor auditory memory.”

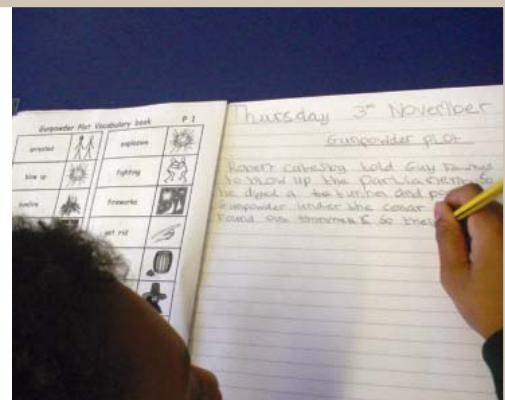
Symbols can act as a visual support for pupils with a limited vocabulary, or who are unable to remember new vocabulary meanings. They help to teach the new word meaning and act as a reminder of words previously known but then forgotten.

Some pupils have word finding and word retrieval difficulties, both of which can be helped by visual representation. Symbolised topic vocabulary in the form of word banks, flash cards, stories, lotto games and wall displays help learning to progress.

This is an example of a sheet used with a Y9 pupil with Specific Learning Difficulties. The purpose is to enable the student to learn subject-specific vocabulary in Geography. Such sheets are initially used in a 1:1 situation. The pupil then keeps the sheet for reference, which provides the necessary visual prompts for the new vocabulary.



Topic vocabulary lists can assist writing. Pupils really enjoy using the lists to help them check that they use the correct word and to spell the tricky ones.



This pupil has a wall for his own words. As words are learned, the symbols which are no longer needed can be removed and new ones added.



Uses of Symbols

Supporting the teaching of concepts

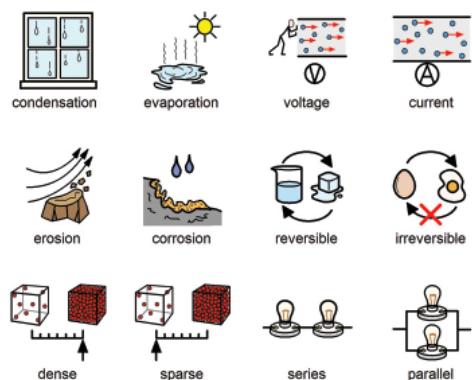
“Older pupils can be supported with learning concepts in science and maths, e.g. evaporation, permeable and improper fraction. Symbols can help to explain the meaning, and as a prompt can also help to reinforce and retain the explanation.”

Symbols are ideal to use when teaching abstract concepts such as ‘before’ and ‘after’, ‘above’ and ‘below’, ‘fast’ and ‘slow’. The visual image of the concept provides pupils with something to hang their understanding on. Consistent use of symbols reinforces the learning. The pupil should have the symbol as long as it is required as an integral part of the learning. The pupils themselves can decide when they reach a point when they no longer need symbols.

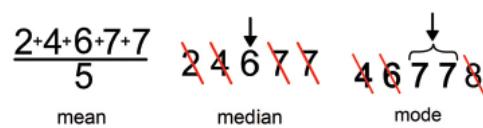
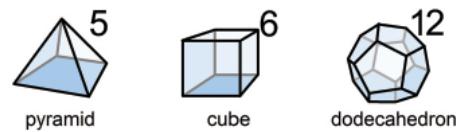
A Y1 pupil was helped to learn the difference between full, empty and half full using the symbol cards.



Symbols have been developed in the Symbols Inclusion Project to cover much of the curriculum up to year 6 (covering pre-school and primary to age 11.) The visual images help to explain the concepts behind the words, enabling the pupil to be confident in choosing the word they want. A few examples include:



The language of maths in particular can be difficult and symbols have been developed for all the maths vocabulary from reception through to Y6. A pupil may well understand the concept of the maths but struggle with the language.



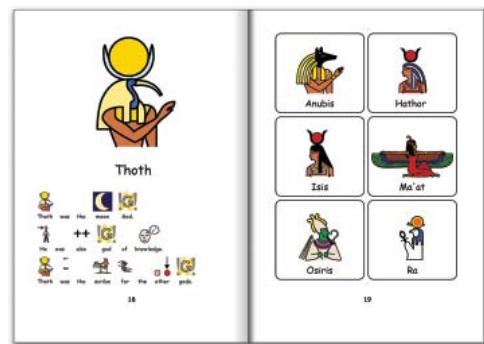
Uses of Symbols

Accessing the curriculum through differentiated materials

"A large bank of materials was created to support differentiated work for individual and group use. These resources save teachers time and are useful aids to classroom assistants."

Differentiated materials are needed to support the wide range of ability in most classrooms. The Symbols Inclusion Project has created a huge number of these which are readily available as cheap or free downloads ready to print out. These include reading books and information as well as worksheets, activities and vocabulary. Many pupils can learn with appropriate symbol-supported reading materials. They can reference these in their writing and/or use additional activity and vocabulary sheets.

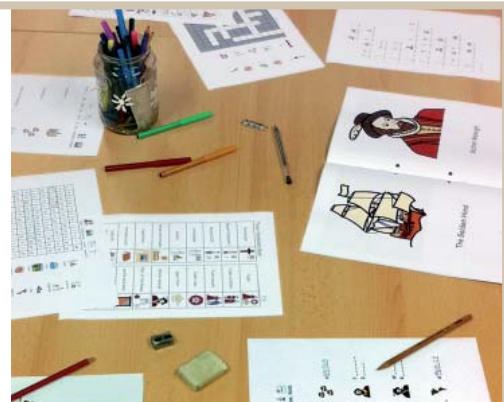
Symbol-supported reading books are much more accessible than published books. Vocabulary support in the books and worksheets reinforces the learning.



Vocabulary sheets assist with the follow-up writing tasks and help the student remember the new concepts or language.

arch		erosional landforms	
bay		groynes	
beach		harbour wall	
cave		headlands	
cliff		longshore drift	
cliff retreat		pier	

All of these materials can be made and adapted using Widgit's symbol software. Many curriculum books and worksheets made in the Symbols Inclusion Project can be downloaded from the Widgit website.



Uses of Symbols

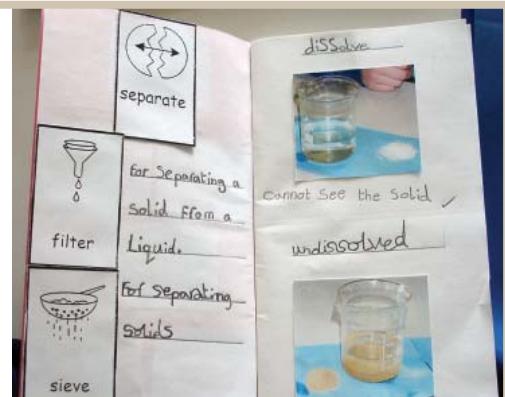
Enabling pupils to explain their understanding

“Symbols can be used to demonstrate evidence of a pupil’s understanding.”

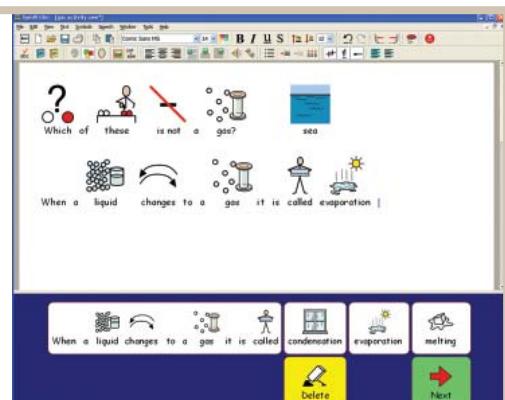
Some pupils are able to learn key concepts and ideas using symbols and can show their understanding by drawings. However, it can be almost impossible for these children to explain what they want to communicate in words. They may not be able to remember the ‘key’ word itself (e.g. ‘condensation’), but are able to use the visual prompt of the symbol to explain their understanding in their own words. Symbols have a vital role for these visual learners.

Symbols are available to support teaching concepts and ideas in most curriculum areas.

Printed symbols reinforce a pupil’s understanding of concepts. In this case printed symbols for scientific terms have been pasted into the workbook. In other cases pupils have used symbols to help them draw their own illustrations.



On-screen grids can be created with symbols and/or text from which the pupil can select the words or phrases they wish to use. This is part of a sequence of questions about solids and liquids. Grids like these help the pupil demonstrate their understanding of the science concepts.



This Year 1 pupil was able to join in an investigation using symbol question cards. He used the cards to ask his friend questions about the topic and then filled the answers into a worksheet, showing that he had understood the conversation.



Uses of Symbols

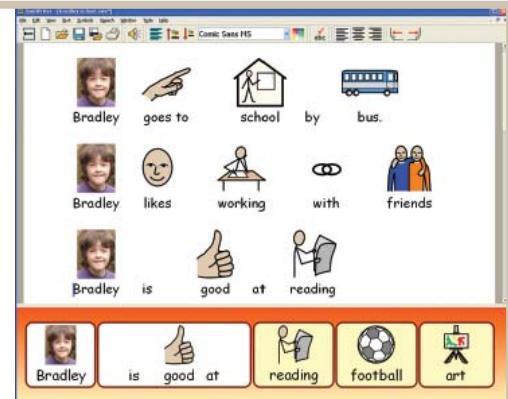
Supporting writing and recording

“Symbol word banks provide visual prompts needed by some pupils to write independently.”

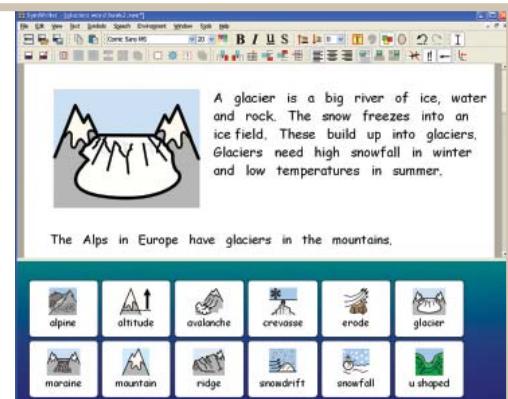
Many pupils find it difficult to think of what to say when they write. Some cannot remember the words, especially if the writing is about a new topic. Others find it hard to think of ideas. Symbol word banks give support in both these situations. They give the visual prompt needed for pupils to have a go at writing sentences independently. Symbol word banks with the topic vocabulary for the lesson will help many pupils to think of ideas for writing.

For those pupils who are not able to write by themselves, Widgit symbol software can be used as a scribing tool. When the adult has typed what the pupil has said into the program, the child can often read the writing back using the symbol-supported text.

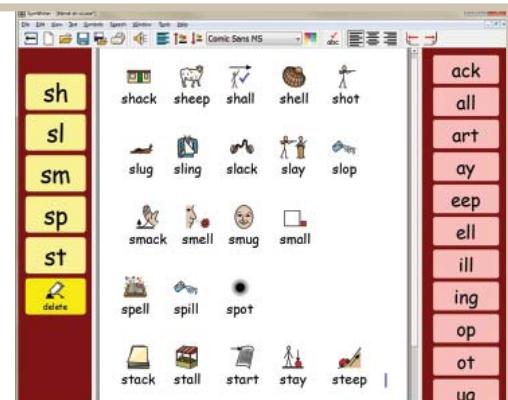
Writing grids can easily be adapted for individuals. This example has a sequence of personalised on-screen grids to support structured writing.



The topic words in this grid have symbols, but the program has been set to send just the text to the document. The pupil can use these topic grids to write using new or difficult vocabulary. The software can also read back the text on the screen.



This word building-activity allows pupils to explore letter blends. Incorrect words are shown by the spell checker and the absence of a symbol.



Uses of Symbols

Helping to improve behaviour, motivation and engagement

"There was a definite improvement in behaviour in some of our under-achieving pupils"

Symbols build confidence and give greater independence. This increased independence has a positive effect on behaviour. Use of symbols enables many pupils to work on the curriculum when their standard literacy skills have not developed to the level necessary to deal with largely text-based materials.

A pupil with very poor language and communication skills found it difficult to express his ideas. As a consequence his behaviour was generally disruptive and his engagement low. The introduction of symbols enabled him to follow the content of the classroom activities

Using the symbol/word cards David began to be able to write independently, transforming his self-image and consequent behaviour.



Very many pupils, whilst not having David's level of difficulty, may be helped considerably by appropriately differentiated symbol support.



This pupil with learning difficulties became engaged in the Romans topic by first playing games with the symbol/word cards. The teacher reported "Good attention to task, making big effort to recall labels from last time." He went on to be able to complete some symbol worksheets, which was a new achievement for him.



Additional Outcomes

More children than expected benefited

"The use of symbols can help to separate out the difficulties of learning from dependency on reading the text."

The visual support for the meanings of words helps a large number of children across many subject areas, not only those children with learning difficulties or with English as an additional language. For many children this is a temporary help whilst new ideas are being learned. Teachers also found that the children did not continue to use the symbols when they were not needed.

A child from Latvia arrived in school with no English. Symbols were an essential first step for communication. The school made cards with both the English and Latvian words which they also sent home to help the family.



Using the visual support of symbols in this group story-telling session enabled less confident children to participate more actively. The class teacher reported a noticeable improvement in engagement across the whole group.



The teacher supported many of the key words in the story by holding up the symbol cards. These cards were then stuck on the wall as reference for later story writing. She found that many more children than expected were able to accurately reconstruct the story, and were motivated to go on to make up their own versions.



Additional Outcomes

Beyond school and into the wider community

“Our county licence means anyone can have symbols wherever they are needed.”

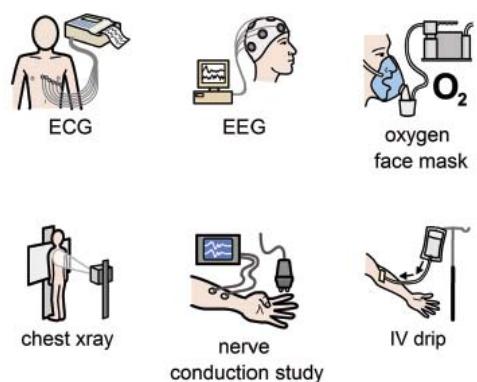
Pupils who use symbols in school because of their learning needs may still require support in communicating and accessing information outside of school, for example at home, in other educational settings and in the wider community. Warwickshire has sought to widen the availability of symbols to make any necessary support available.

For example, a young person attending a scout group may want to use the same symbols that they use in school. There has also been a particular interest in Early Years settings and materials have been made for child minders, pre-schools and nurseries. Using the same symbols and style of support ensures consistency as children grow and move on.

Symbols in a local sandwich shop. Other shops in the street began to use symbols, which was reported by the local newspaper.



As part of this expansion, a project with Warwick Hospital has led to the development of symbols for many medical procedures. These are designed to help and reassure children with communication difficulties visiting hospital.



Individual symbol cards illustrate clinical procedures. The key ring with cards shows the sequence of procedures for an individual patient.



Case Study 1

An Individual Success

Using symbols with a pupil to support speech, learning and curriculum access from Reception to Year 5 in a Warwickshire Primary School.

Background Information

Jane entered Reception with a specific speech and language impairment. She understood language well but she had a severe expressive language delay. She was only able to articulate (intelligibly) about 30 words.

She also used some Makaton signing, natural gesture and facial expression as well as pointing to communicate. The signing was not always successful because of difficulties with fine motor control. Despite this she managed to communicate competently with peers using a combination of the above strategies.



Initial Targets

The first target set was for Jane to be able to articulate the sound 'b' in consonant-vowel syllables.

Initially a symbol-supported story book was created about a monkey called Boo. A soft toy was found to represent Boo as a real object. This gave a greater impact to the activity. The focus was words with the initial sound 'b' - ball, bag, bed, bike, beach etc. The story was read to pupils, including Jane, in a twice weekly language group with sessions over a term. Boo, the soft toy was designated as Jane's special friend, helping her to articulate the sound, using the adult example and the symbol/word link. Activities using flashcards in a box, or laid out on the floor with a spinner, were played to reinforce the vocabulary. Other symbol-supported resources were used in group and individual sessions to further reinforce the work of the language group. Jane also took the story home so her parents were able to read it with her. A second symbol-supported story was then made specifically for Jane, where she was in the story. Her photograph was inserted into the text. She loved taking this home to share with her family.

Case Study 1

Impact

Initially Jane's attention had wandered in the language group, but this soon changed once the resources were introduced and she became more motivated to join in. After half a term she was able to say the 'b' sound in isolation and within 8 weeks she started to use it at the beginning of words with minor prompts. Finally after a term she was using 'b' unprompted in words such as 'boo', 'bye.' Her self-esteem greatly improved as a result of her success.

Continuing Support

Symbol-supported materials have continued to be used with Jane to support her speech development and access to the curriculum throughout her years at school. She is now in Year 5 and is able to hold a conversation and read reasonably fluently (NC level 2C). Jane can now articulate all the speech sounds except 'j', 'l', 'ch', and 'sh'. She has a target to achieve these before leaving Primary School. Her spelling is progressing well and she can write simple sentences independently. Because her range of vocabulary is still limited, she continues to benefit from symbols to support writing activities and when learning new subject-specific words. Jane has good self-esteem and enjoys school. She has always been in a mainstream class and has age-appropriate social skills and many friends within her peer group.



Symbols have played an important part in Jane's learning and inclusion at school. The Class Teachers, Teaching Assistants, Speech and Language Therapists and Specialist Language Teachers have consistently used symbols to support and enhance Jane's understanding and learning. Symbols have also helped to create a Communication Friendly Environment within the school which benefits not only Jane but the whole school community.

Case study from a Specialist Teacher - IDS Teaching and Learning

Case Study 2

A whole school view of symbols

At Weddington Primary School we have been developing a Communication Friendly Environment for a number of years but we always find there is much more to do!

We started by simplifying then colour coding a map of the school. This led to using colour-coded signs to help visitors find their way around. Each classroom has a picture of the teacher on the door with a coloured frame that matches the colour on the map.



Symbols are used to support access to the environment. The most recent developments are the labelling of the cookery area, the library and maths resources.

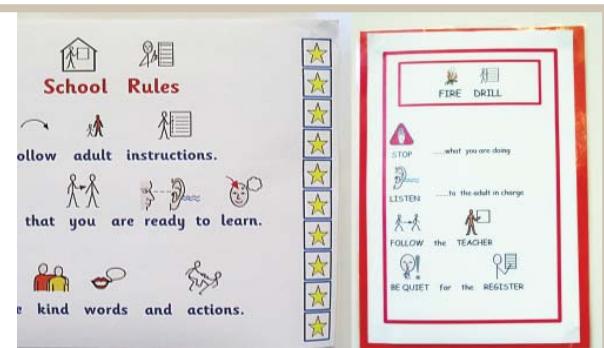


Each class displays a symbol-supported daily timetable.



Important information that all need to be aware of also has symbol support. For example:

- New school rules
- Fire drill
- The weekly target such as being polite or good walking around school.



Case Study 2

Using symbols has become second nature to many staff, both class teachers and teaching assistants. Here are a few quotes.

“Using symbols allows ‘E...’ far better access to the learning.”

“Due to speech and language difficulties it is very difficult to engage/ communicate with ‘P....’ Communicate: In Print is a valuable resource for us both.”

“I offer my children symbolised and unsymbolised worksheets. Children who can read well still prefer the symbolised sheets.”

“Very useful for classroom signs. I will need to use it for the Christmas songs so all children can access the words!”

“Symbols have enabled him to participate more fully in class activities like retelling a story by ordering pictures, a piece of homework was to make a party list. I sent home pictures from which he was able to select the items he wanted. He was able to complete the homework more independently. Communicate: In Print allows my pupil greater involvement in lessons and activities which otherwise would exclude him due to speech and language difficulties.”

“I have used pictures and symbols to make a transition booklet for my pupil with ASD. It made the transition smoother for the child.”

“... helps childrens’ confidence when reading. The pictures make activities more motivating. We use it a lot for word-banks to support independent writing and interactively when doing phonics. When children spell the word they know they are right if the right picture comes up. We also use symbols to make group objectives easier for the children to remember.”

Pupil comment: “I don’t understand instructions but the pictures help. I used pictures to do questions about myself – then everyone copied me.”

Pupil comment: “Pictures help me to read a bit better.”

“It would be really tricky in Reception without Communicate: In Print. The pictures help the children understand the words on notices when adults are not there. The children love playing with the symbolised high-frequency words on the wall.”

“The symbols give meaning to written words.”

Widgit software, resources and advice

Widgit has developed a wide range of products and services to cater for the needs of symbol users and service providers.

Software

Communicate: In Print is a tool largely for teachers and can be used to make vocabulary cards, reading books and worksheets. Its flexible layout makes it ideal for creating materials.

www.widgit.com/inprint

Communicate: SymWriter is the symbol writing tool for students to use to write with symbol support. It is also suitable for teachers to use to create symbol-supported documents.

www.widgit.com/symwriter

First Keys 3 is a program for students to gain keyboard familiarity and practise spelling with the support of symbols.

www.widgit.com/firstkeys3

Communicate: Ideas is a symbol-supported mind-mapping tool, ideal for group work brainstorming concepts.

www.widgit.com/ideas

Communicate: By Choice is a suite of early concept activities using pictures and symbols. These are suitable for independent work.

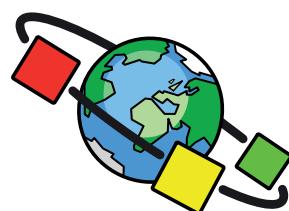
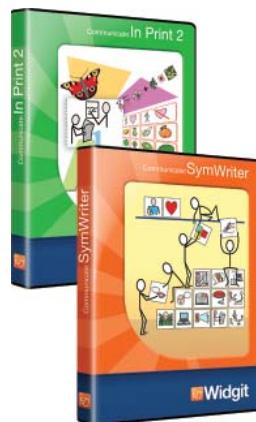
www.widgit.com/bychoice

My 1st Mouse is a fun way to help young children from 2 years old and upward to learn to use a mouse.

www.widgit.com/my1stmouse

SymbolWorld.org provides news, information and popular interest stories with complete symbol support. SymbolWorld is free and suitable for all ages.

www.symbolworld.org



Widgit software, resources and advice

Our team is always happy to answer any questions you might have. You can call us on **01926 333680**, email **info@widgit.com** or follow the links for more information.

Ready-made symbol resources

There is a very extensive range of ready-made learning support materials created through the SIP Project. These are available as downloadable files for Communicate: In Print and Communicate: SymWriter. These materials are directly linked to the curriculum or specific language and learning objectives. Many are ideal for use by classroom assistants supporting individuals and small groups.

www.widgit.com/resources

CFE Pack

The Communication Friendly Environments (CFE) pack is designed to advise and assist you with making your school or centre “communication-friendly”. It includes an explanatory booklet as well as templates and resources. This can be bought on CD or as part of the School Bundle Packs.

www.widgit.com/cfe



Signage Tiles for Schools

Sets of ready-made signage tiles are available for purchase, as well as a design service for bespoke signs. The value of symbol signage is that the images relate to the vocabulary seen in the classroom making environments more accessible.

www.widgit.com/signage



Support and training

The Widgit website offers a range of support materials and videos to give help in using the software and in the appropriate use of symbols. In addition there is a network of Widgit Centres around the country who are able to offer advice and training. These are also listed on the website.

www.widgit.com/training



Widgit Symbol Resources

www.widgit.com/resources

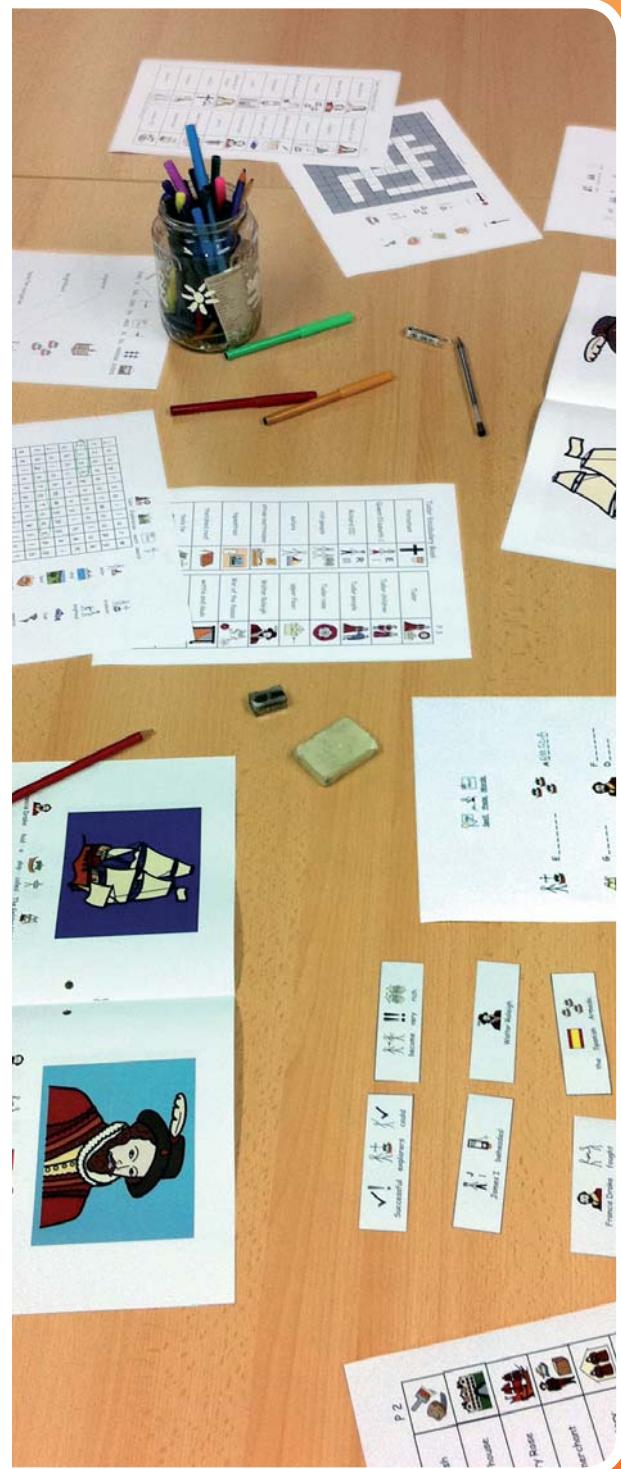
There is a very extensive range of ready-made learning support materials created through the SIP Project. These are available as downloadable files for Communicate: In Print and Communicate: SymWriter. These materials are directly linked to the curriculum or specific language and learning objectives. Many are ideal for use by classroom assistants supporting individuals and small groups.



Symbols Inclusion Project

www.symbolsinclusionproject.org

The Symbols Inclusion Project (SIP) is a collaboration between Widgit Software and Warwickshire IDS (Integrated Disability Service) on the use of symbols to support inclusion and curriculum access. The purpose is to create genuinely inclusive learning environments for all children and young people.



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