

Introduction to: Symbols



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This booklet is designed for organisations, teachers, parents and carers involved in supporting children and adults with learning difficulties who may find the use of graphic symbols helpful. It seeks to explain what symbols are, how they may be of use, and to identify some of the important issues in symbol use.

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First published in 2000
Revised edition 2004

We are grateful to the staff and students who have willingly shared their work and allowed us to use it in this booklet. These include:

Dave Wood and staff from Wilson Stuart School,
Clare Martin from George Hastwell School,
Staff of Bilton Infants School.
Justin Drew
Marion Rapson
Wendy Marriott
Sally Paveley
Leo Berry
Gela Griffiths
David Fulton Publishers
Ravensbourne NHS Trust

There is also extensive information on symbols, symbol software and symbol use on the Widgit web site: www.widgit.com

And a web site specifically designed for symbol readers at www.symbolworld.org



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Introduction to: Symbols

An information leaflet describing why symbols may be of use

Symbols have been used in all societies as a simple and direct means of communication. We see symbols in the environment.



People with Communication difficulties have used them more extensively. The advent of technology has extended symbol use both as a means of creating materials FOR people with communication difficulties and also BY them.

1. Symbols: who may they help?

- Very young children and children who have not started to use text may begin reading by recognising pictures and then start to sequence these to communicate ideas. Symbols can help children by making words more tangible.
- Children who have difficulties with word recognition, spelling or comprehension or who simply need motivation to write, are helped and motivated by support of pictures, symbols and sound.
- Adults and young people with learning disabilities use symbols to enable access, to reading and writing, to the curriculum, supporting independence and self-advocacy.
- People who use alternative and augmentative communication systems (AAC) use symbols as part of their normal communication support.

2. Some examples of symbols and how they can help.

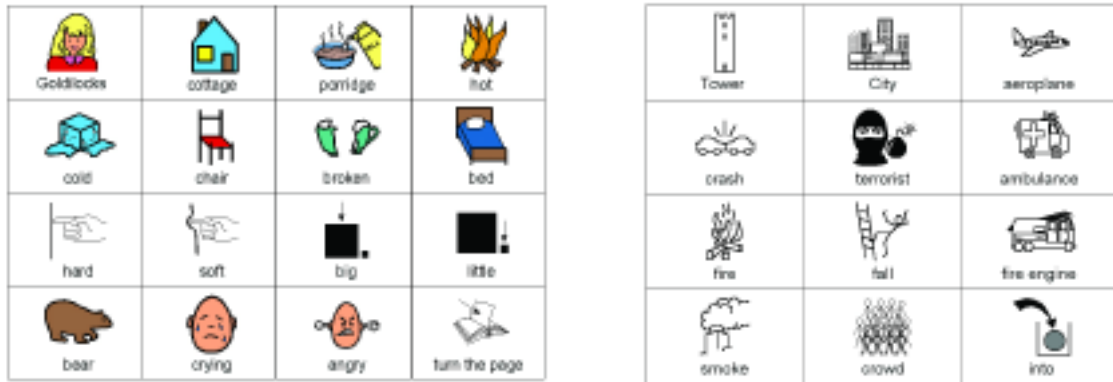
2.1 Supporting Communication



I want		I see		thank you	
drink	biscuit	apple	cake	crisps	banana
book	sand	bricks	pens	farm	puzzle
shoe	jumper	trousers	coat	sock	hat

Symbols can support many ways of face-to-face communication, communication books, word and phrase cards and PECS.

Symbols are easy to manipulate and can link words to real objects and actions. Communication grids can enable participation. This grid of Goldilocks helped a child join in re-telling the story; whilst the other grid was made very quickly to enable a group of adults discuss events on the television.



The adults had not seen some of these symbols before, but because they were introduced in context, they were easily understood. This example also shows why we need access to large vocabularies. It is not because we expect many symbol readers to acquire large vocabularies, but so that we can engage in whatever topic we want.

Symbols can also ensure that every member of a group understands the topic of conversation.

2.2 Supporting Independence

Timetables are about more than knowing what is happening next. Timetables can help people understand what is happening and how time is passing. It is a means of helping the student to be more in control.



It is very easy for the teacher or therapist to take control of conversation and actions.

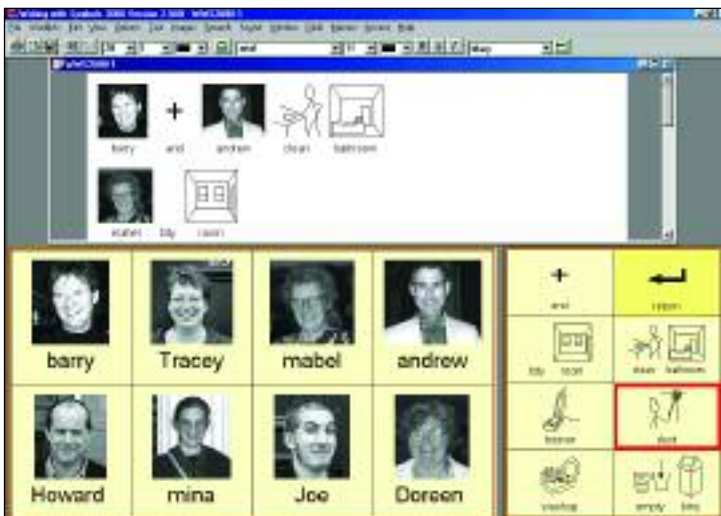
Symbol activities, such as these large soft-play dice, allow the student to become more active in the task. The student can roll the dice to decide on the next activity rather than the teacher.



Rebecca attends college and is learning to develop independence skills. She has very little speech, but can communicate very effectively with small communication books that her mother makes for her using photographs and topic related symbols. These books help other people interact with Rebecca by giving clues on what to talk about.



A rota like the one below was made for people in a residential home to help them draw up the rotas for domestic tasks. Instead of the care staff always doing it, the residents started to take part. The rotas were then printed out in symbols and pictures for everyone to follow.



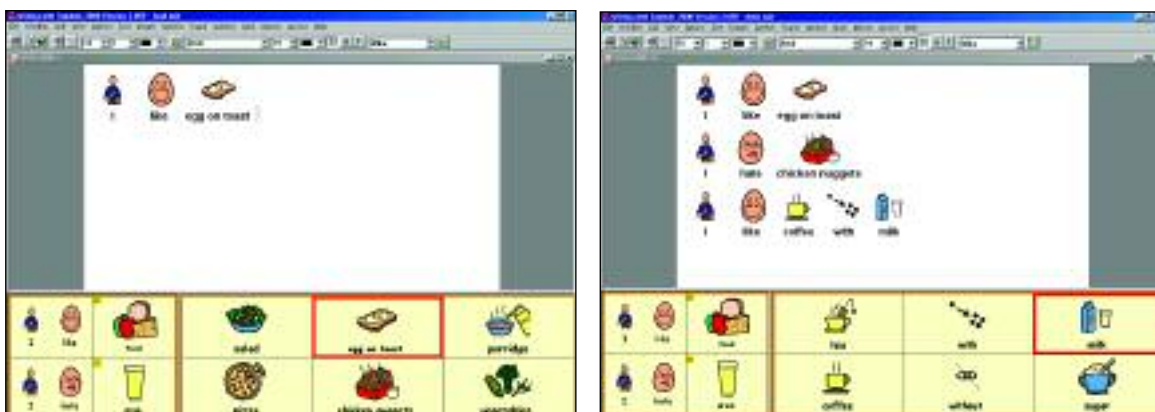
The timetable on the right of page 4 showed members of a day centre what activities were available. Members had tended to go to the same activities each time, but, when they saw this sheet, they started to be more adventurous and try different things.

2.3 Starting to Write

As we have seen symbols can make a big difference to communication. However, to give real independence we need to enable symbol users to write and create their own materials. The grid below is designed like a dynamic Voice Output Communication Aid (VOCA) but with the additional feature that it stores the communication as a document. This allows the user to 'see' their conversation. It offers a bridge, between speaking and writing, by seeing what is said.



Writing with Symbols has on-screen grids that lets the student build text by selecting words, phrases or sentences. In the example below there are two grids on the screen. The one on the left of the screen acts as a kind of 'menu' enabling the writer to load different topic grids on the right. These pictures show two stages in writing about likes and dislikes.



Grids are usually created for specific purposes. They can be very simple or can give access to a very wide vocabulary. The one below on the right uses Wordwall from Sensory Software with the Adult Vocabulary grids.



2.4 Supporting learning

There are so many ways in which symbols can support learning. In a primary school this teacher is reading a story to a group. As she reads each key word she holds up a flash card with the word and symbol. This gives a strong visual clue to the meaning as the word is spoken.

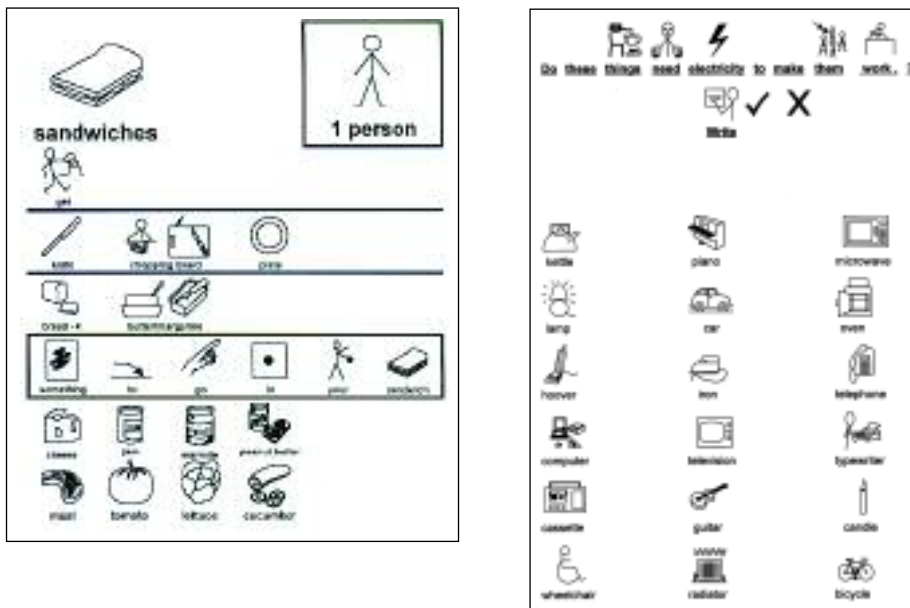


The teacher found that not only children with obvious learning difficulties benefited from this. There was increased attention from all of the group. Some of the children made displays to show their understanding of the sequence of events in the story.

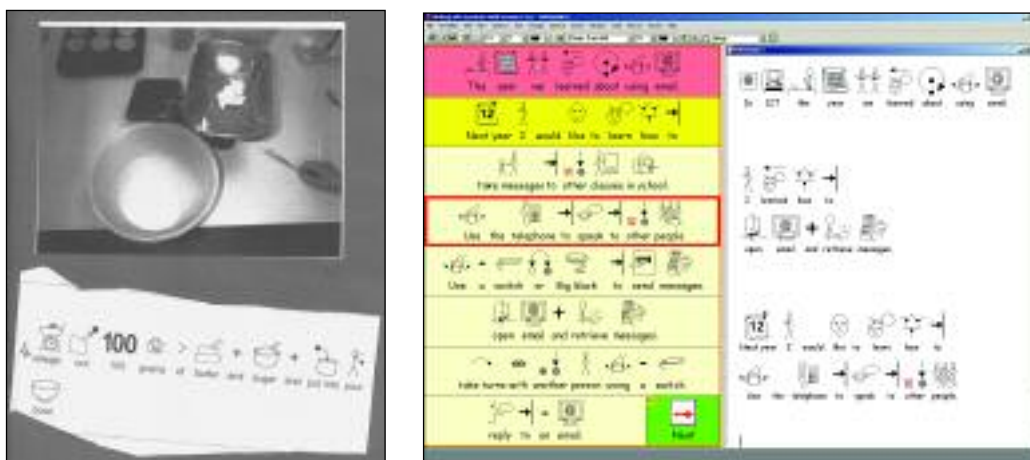
Recipes and worksheets can help students at all levels. The recipe on the left on page 7 was used by a student with learning difficulties, in a mainstream school, to help her get everything organised at the beginning of the lesson. Other worksheets helped her show understanding. A student may understand the educational concepts but not always have the language to express their knowledge.



Her support assistant made templates for Writing with Symbols that could quickly be filled in each day.



In the picture below, a student followed a recipe, while the teacher took digital pictures of each step. When the task was finished, the student matched the pictures to the steps in the recipe as a record of achievement. In doing so, she also made a pictorial recipe book for future use.

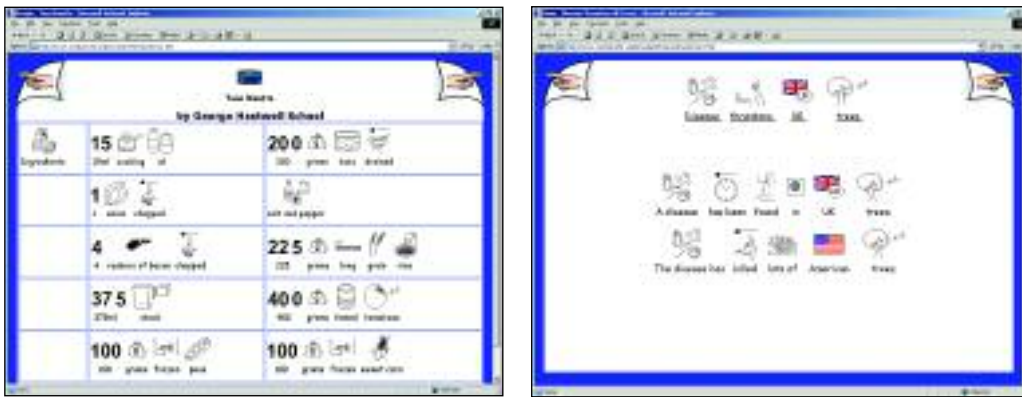


The screen on the right is from an activity to record achievement in ICT at a special school. These students are used to working with symbols and can manage quite complex materials.

2.5 Creative writing

Becoming a writer is a very important first step in gaining literacy. As well as the sense of achievement gained from writing, it is a way of making personal reading books. By making two copies of the book you can start to build a library of books for other pupils to enjoy. The book on the right is an adaptation of a classical tale. Symbol supported materials can help to bring our rich heritage of literature within reach of all children.

There are sections of personal stories from readers, stories from children and adults as well as well known stories. There are learning materials for all ages and an on-line magazine for adult readers called eLive.



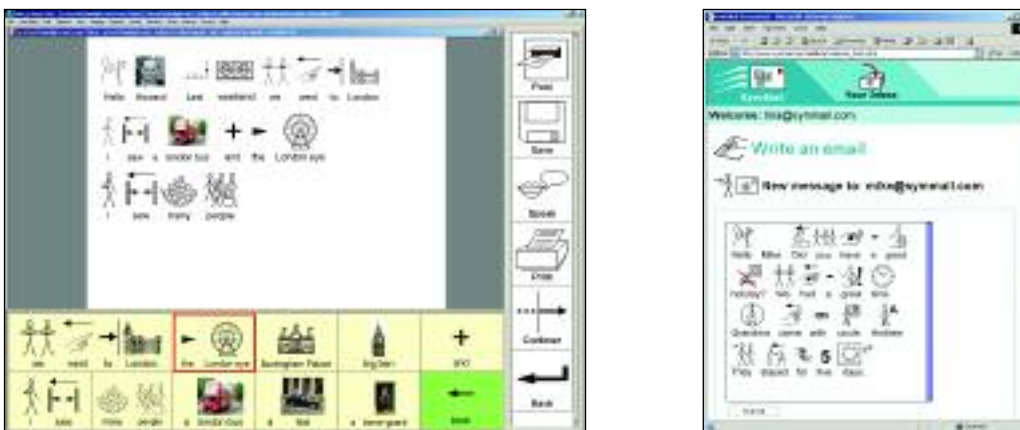
eLive deals with topical items of interest and includes news, film reviews and articles. An important aspect of the whole symbol world site is that much of the content comes from users.

2.7 New technologies

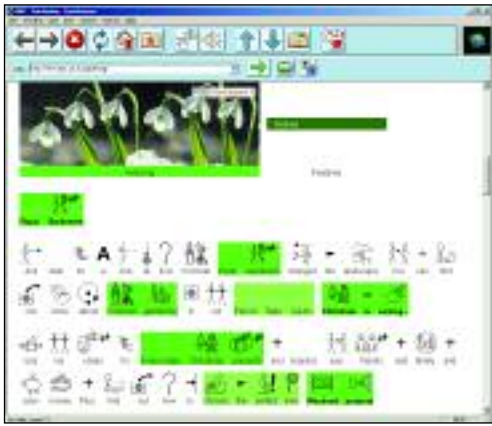
New technologies emerging are offering more tools for manipulating symbols. Communicate: In Print is a symbol desk top publishing package, that gives all the power of a symbol processor with the flexibility of layout needed for creating print based books, newsletters and other information materials.

There are also very important developments that will give symbol users more tools, to communicate by email and to browse the Internet.

There are two symbol email programs that can help people communicate easily at a distance. The one on the left is Inter_Comm which has on-screen grids, and the one on the right is a web-based email that can be accessed from any machine and does not require specific software to be on the machine.



Also under development are a web based email mail program and a symbol browser called Communicate: Webwise. The browser will turn ordinary web pages into symbol pages.



This is a page from the BBC website seen in Communicate: Webwide. The highlighted items are links to other pages. The favourites list can have pictures to remind the user what a site is about.

3 About Symbols

3.1 Symbols or pictures?

With easy access to digital cameras and scanners and also to large volumes of clip art, we have the opportunity to use a vast range of images to support information. However, we need to understand the nature of these images if they are to be used sensibly.

Photographs are very valuable in giving detailed images. However a photograph can give too much information. In this example the picture is too complicated to see easily, and also it gives a lot of information, whilst the sentence implies that the image just represents the single idea of Mike. In this case a picture of just Mike would be preferable.



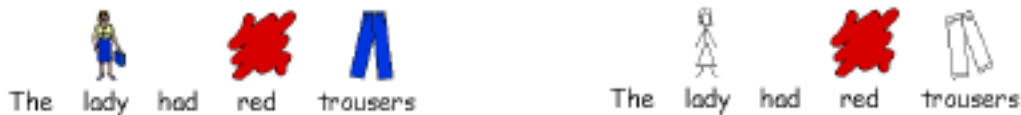
In this second example the picture is used to give context and thus to expand the information.



A symbol represents a single concept, whilst an illustration or a picture can give a large amount of information. When choosing to use pictures in place of symbols then you need to make sure that the picture just shows the concept concerned.



You may also need to think about the actual images and the colour. In this example the lady is too detailed and doesn't match the sentence, and the trousers are blue. The information may have been much better using line drawings.



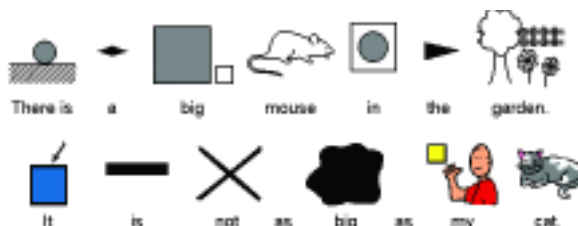
On the other hand, where the language being used is simple or if the images are used singly as in Flash cards or on communication boards, the addition of colour and extra detail can work well:



3.2 Types of symbols

There are a number of different symbol sets available. Most of them are black and white line drawings, such as the Widgit Rebus and Makaton symbols but the Mayer-Johnson Picture Communication Symbols (PCS) are also available as coloured images.

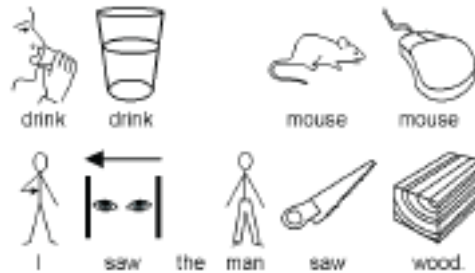
Most of the symbol sets have common underlying ideas and can be mixed and matched to suit the purpose. To a large extent the choice of symbol set will be determined by personal preference as well as purpose. For some people the simple line drawings are clearer than the illustrative coloured ones. In other situations the colour can be motivating.



We have learned over the years that it is more important to consider the communication needs of an individual than to stick rigidly to a single graphical set. As more and more information is available in the public domain, it is probably important that users become as familiar as possible with alternative symbol styles.

It is more important to understand the level of the symbols and the level of the language used than the detail of the symbol style.

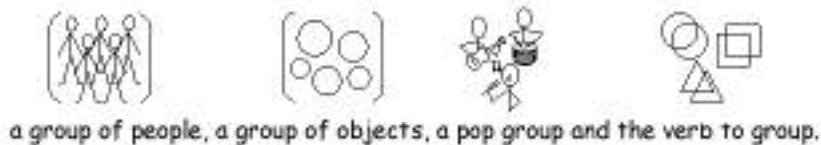
Far more important than the type of symbol is choosing the right image for the concept. In English we have many words that have the same spelling but different meaning:



3.3 Getting the meaning right

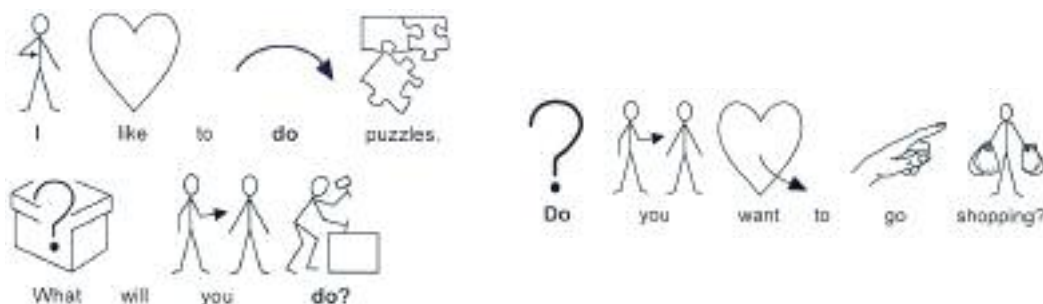
In Writing with Symbols and the Communicate series you can choose the most appropriate symbol from the current wordlist to ensure that you choose the most appropriate image.

Some words have many meanings:



Similarly there are images that can serve more than one word, where the basic concept is the same, for example 'chat' and 'gossip'. Many such synonyms are in the wordlists, but in **Writing with Symbols** and **Communicate: In Print** you can also edit the text associated with a graphic to give an alternative nuance or to personalise the vocabulary.

Two verbs that are very awkward to represent are 'work' and 'do'. We use these in many different ways, and we need correspondingly different symbols.



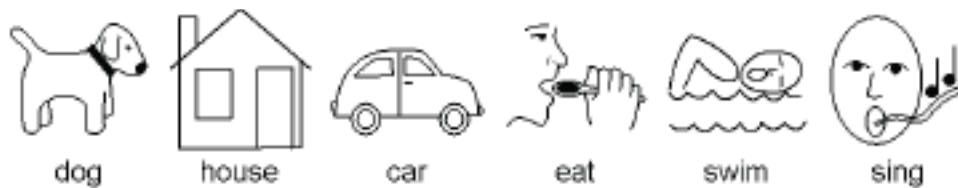


3.4 Level of Symbols

It may be helpful to think of symbols as falling on one of four levels. These are not precise divisions but are a guide to selecting appropriate images:

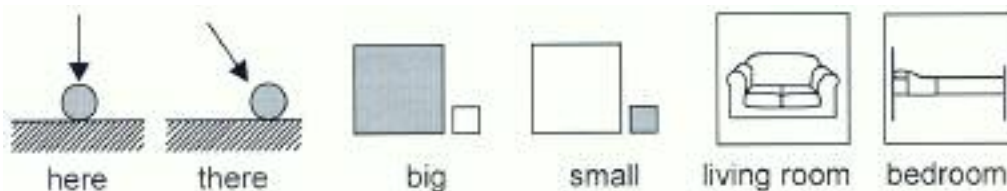
A. Recognisable symbols

These are representational images of well-known objects or actions. These should need little teaching as long as the reader is familiar with the object or action represented.

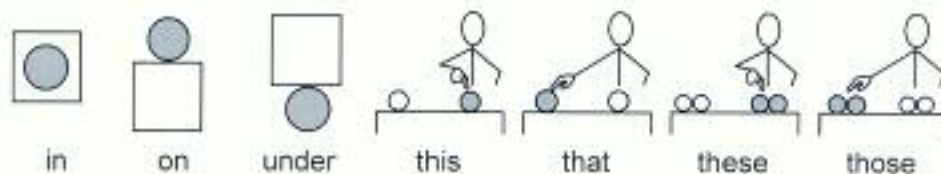


B. Guessable symbols.

These will require explanation and then the meaning may be guessed. These often fall into groups - once you understand one the rest are easy. Examples of this type are:

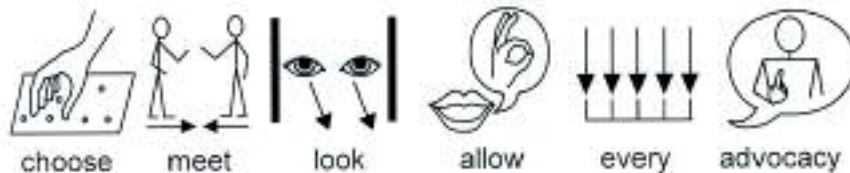


Explaining related symbols as a group will help students see the meaning of the symbol more clearly, and they will be more likely to recognise other symbols in the group when they meet them.



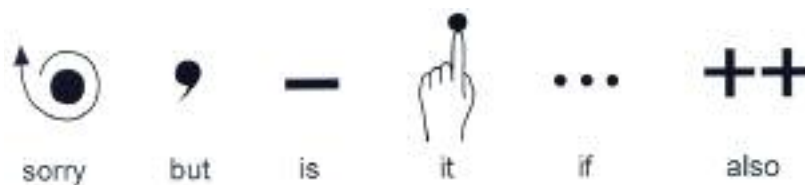
C. Learnable Symbols

These symbols relate graphically to the concept represented. They cannot teach a concept, they can only remind the reader of a concept already understood. These will, therefore need explanation, but people with learning difficulties may have a much better chance of remembering them than the text alternative. Such symbols include concepts like:



D. Abstract symbols

These are the most difficult symbols to work with. Many of these are purely abstract and contain no graphical clues within them. Fortunately a great deal of meaning can be conveyed without needing to use many of these symbols, or in some cases, any at all. Symbols like this include:



3.5 Characteristics of symbols

Each symbol set has its own style and set of guidance on design. They have differing levels of schematic structure. The first row, (Mayer-Johnson PCS) are more illustrative so that each concept has a pictorial representation. The second row (Widgit Rebus) has a more schematic structure where all items of a type conform to a set of rules.



There is a detailed glossary of the Widgit Rebus set which explains the schematic conventions used, and introduces the grammatical markers that can be added to symbols to extend the vocabulary.

Here are a few of the schema:

- Buildings, rooms, shops etc. each have a basic shape, with identifying items within them.



- People, jobs and family



The circle implies possession. The filled in medical cross denotes the doctor or dentist and the white one the nurse or dental nurse.

- Quantity



- Tenses



- Comparatives

As a symbol reader's language develops, they may want to be able to use more expressive language. Adding grammatical markers to a common symbol helps to explain the qualification added.



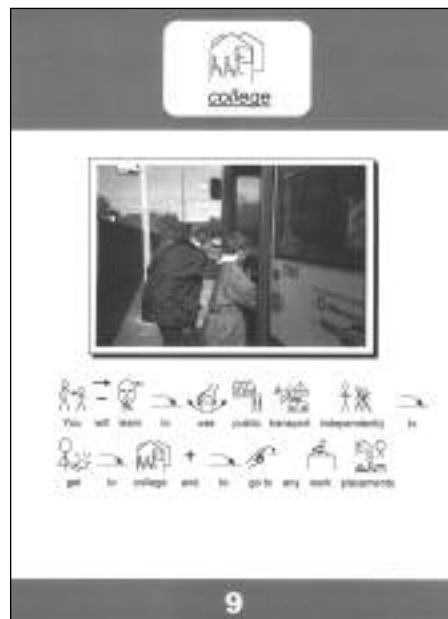
4. Making good symbol supported materials

So far we have looked at some good examples of symbols, but have not discussed the questions of making sure that it is genuinely understandable.

We have discussed choosing a symbol that represents the meaning. It is better to have no graphic than a wrong one. However, the most important factor in symbolising information is to make sure that the language is clear enough. It is essential that the total information and vocabulary are conceptually appropriate to the reader before any attempt is made to support it with symbols. It is also important to consider the level of understanding of the reader, how familiar they might be with symbols, and whether they are likely to need help in reading it.

Sentences should concern only one topic, and ideally have no more than three or four information carrying words.

A symbol reader who does not follow the text line will not see the punctuation, and so it is often helpful to create documents where each sentence or idea is on a separate line:



In these examples the photographs have been used as an additional reference rather than confusing the page by adding them to the text.

Not every word needs to have a symbol. In the example above the symbols for 'the' and 'as' have been removed because they do not carry any information. Although removing symbols can make the page less cluttered and therefore possibly less confusing, it is really important to make sure that the meaning is still represented. The symbol reader should be able to work out the meaning independently, especially if it has been explained first.

In Writing with Symbols you can 'hide' the text. This will show the page without the text underneath. This can help you check the symbol content of a communication without being distracted by the words. We are so focused on seeing the text that it is hard to discipline ourselves not to read it. It is good practice to read any information you produce without the text to make sure that you can gather the essential content, and that there are no key concepts missing.



If you are writing for readers who will understand very few symbols then it may be better to adopt a different strategy, such as supporting the whole sentence with a single symbol or image.

This page is from a customer satisfaction leaflet from Ravensbourne NHS Trust, and shows that using key symbols can be very communicative. In this case it is better than offering each sentence in symbol sentences.

A note of caution:

It is very easy to use symbols to pay lip service to the idea of making information accessible. Unfortunately we have seen many examples where this has happened. The corporate mission statement typed into a symbol processor will often result in a meaningless jumble of images. The issues of using symbols successfully are first and foremost linguistic. The addition of symbols cannot elucidate a message that is not already clear, and so the document must first be written in clear plain language. Symbols cannot teach a concept, although they may help by supporting teaching. It is therefore, inappropriate to use symbols to discuss concepts which the reader does not already understand.

Effective use of symbols means involvement of managers at all levels in drawing up policies to ensure that materials are used consistently and that training needs are effectively met at levels which are appropriate. When training and policies are in place, symbols can make a highly effective contribution to the lives and involvement in society of people with learning disabilities.

An organisation trying to bring information to its members would be well advised to start at the ground level, with environmental labels, notices, rotas and timetables. It is only when the user has confidence in these graphics that there will be the capability to understand them in more complex or more distant situations. Daily contact will build the necessary familiarity to make this an acceptable form of communication, and will help to raise awareness of staff and carers alike.

However, used sensibly, symbols can add a great deal to the communication, information and independence of many people, be they children grappling with early language or adults with more extensive learning difficulties. The books *Symbols Now*, by Dr Chris Abbott and *Literacy Through Symbols*, by Tina and Mike Detheridge, give many examples of how symbols are used within the UK to enhance lives and increase opportunities.

The examples below are all written by symbol writers, and gives a testament to the opportunities symbols and symbol software has given.



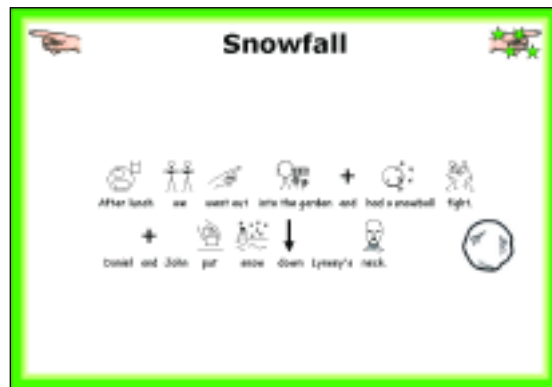
A story written by a parent



A young adult writes for symbolworld.



A student writes with his mother's help.



A student from Lakeside school.

Writing with Symbols is now available in 15 languages. These handle the grammatical constructions demanded by each language as well as including some cultural or language dependent symbols. There is more information on symbols and symbol software on the website www.widgit.com