The following information was taken from a presentation on communication given by Finn Emmerson, a Speech & Language Therapist, at the ASSERT conference in September 2000.

LOW-TECH COMMUNICATION AIDS

Low-tech refers to the type of communication aid which does not offer a mechanical voice. These systems do not rely on batteries or a power source, they therefore, never break down. They are cheap to produce, maintain, expand and upgrade. They usually offer greater portability than high-tech systems.

Low-tech communication can range from the simplest form e.g. offering two objects as a choice, to a highly sophisticated form e.g. a symbol book of a hundred symbols that can be sequenced into sentences.

VARIABLES

When deciding on the choice of an augmentative means of communication, there are many variables to be considered. A Speech and Language Therapist via assessment, will be able to determine the appropriate approach.

Some Variables To Consider:

Level of understanding - Is the person able to comprehend the meaning of symbols? If not, photographs or objects may be more appropriate.

Vision - Is the person able to see a playing card size photograph? How large or small can the materials be?

Scanning - How many presented objects/photographs/symbols can the person scan at any one time.

Physical Difficulties - How will the person access the communication aid? Can they finger point? Press a button? Control their movements to touch the right one first time? If the person can pick up an object/photograph/symbol can they release it to give it to you? Does the person show preservation i.e. return to the same thing again and again?

Portability - How will the communication aid be transported? Is it safe? Is it too heavy/bulky?

Funding - Who will pay for the aid? Who will fund repairs or upgrading? Who will make it? Who needs to be trained to use it?
A Speech and language Therapist will be able to advise you on these issues.
OBJECTS OF REFERENCE

People using objects of reference to communicate are usually found to be using life size objects, if not their own personal objects e.g. their own cup.

If able to, some people will use a collection of miniature objects. This is a developmentally more difficult skill as miniatures offer representation of real objects.

In some locations there will be a **uniform** approach to the use of objects e.g. in some schools, each class will have the same objects to represent the same activities/places.

There is argument that all objects of reference should be personalised, so using objects or parts of objects that the person actually experiences. For example;

- a shopping bag from the supermarket they go to.
- a piece of carpeting from the room where the next activity takes place.
- a piece of webbing from the belt in the school bus.

The following are examples of object representation; how they can be shown to the person when speaking, to aid their verbal comprehension; and how the person can use an object to communicate to others.

<table>
<thead>
<tr>
<th>OBJECT</th>
<th>COMPREHENSION</th>
<th>EXPRESSION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spoon</td>
<td>It's dinner time</td>
<td>I'm hungry</td>
</tr>
<tr>
<td>Biscuit</td>
<td>Do you want a biscuit?</td>
<td>Can I have a</td>
</tr>
<tr>
<td>biscuit?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cup</td>
<td>Do you want a drink?</td>
<td>I'm thirsty</td>
</tr>
<tr>
<td>Brush</td>
<td>Brush your hair</td>
<td>Brush my hair</td>
</tr>
<tr>
<td>Pad</td>
<td>It's time to change your pad</td>
<td>I'm wet</td>
</tr>
<tr>
<td>Sponge</td>
<td>Bath time</td>
<td>Can I wash my</td>
</tr>
<tr>
<td>hands?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Car</td>
<td>We are going out</td>
<td>Where's Dad?</td>
</tr>
<tr>
<td>Bed</td>
<td>It's bed time</td>
<td>I'm tired</td>
</tr>
<tr>
<td>Book story?</td>
<td>Let's read a book</td>
<td>Will you read a</td>
</tr>
<tr>
<td>Teddy</td>
<td>Do you want your toys?</td>
<td>I want to play</td>
</tr>
<tr>
<td>Dog</td>
<td>It's time to walk the dog</td>
<td>Where's the dog</td>
</tr>
</tbody>
</table>

PHOTOGRAPH COMMUNICATION
This is the next developmental stage of understanding, in the hierarchy of communication skills. A person, if able to, would move onto using photographs after using miniatures.

Usually a person will use photographs depicting their own objects. Verbs can be represented by photographs of the person doing specific activities

  e.g.  painting,
       playing musical instruments,
       swimming

But often verbs can be represented by photographs of the objects used

  e.g.  paint brush
       drum
       swimming pool

N.B. When taking photographs for a communication aid, remember to take them all the same way i.e. landscape or portrait, especially if you intend to present them in an album!

Think carefully about the type of album you might use. Smaller ones are more portable! The albums with adhesive pages do not last as long as the albums with pouches.

Some flash card teaching aids offer good quality photographic representations. They can also work out cheaper than purchasing and developing a couple of rolls of film. Most flash cards are bigger than the size of a photograph but some specialist catalogues produce flash cards the size of a playing card. Boxes or packs of flash cards are defined by categories e.g. objects, verbs, prepositions. Beware of verb flash cards to represent activities. A lot of people pay more attention to the model in the photograph rather than the activity it depicts!

In the stage after coloured photographs, black and white photographs are introduced. Black and white photographs are not often used for communication aids; mainly because few people use black and white film, it tends to be more expensive, and a good quality camera is required to produce adequate pictures. This stage is generally missed in academic settings such as schools, preferring instead to move straight onto symbols.

SYMBOLS

There are many different symbol systems. Several are now available as computer packages e.g. Rebus symbols used on the WIDGIT, Writing With Symbols programme. Other symbol systems comprise of sheets or pages that may be photocopied.

Differences will be found between symbol systems in the choice of icons to represent words. Differences will also be found between updated computer programmes. Symbols can change but more usually the vocabulary is extended.
Symbols are commonly used to identify buttons on a speech output device.

Symbols are used widely in special schools within literacy, to aid reading and writing. Symbols should be used with the word written underneath. Sometimes symbols are colour coded to define concept categories e.g. nouns, verbs, adjectives, numbers etc.

Colour coding can also be used to aid people with more severe physical difficulties who cannot point to a specific symbol i.e. they can fist point or eye point to a group of symbols and then to a colour, the "listener" can then identify the symbol the person is referring to.

There are two American approaches to the use of symbols which are becoming widely used in special schools. The first is the T.E.A.C.C.H approach where symbols are presented in the form of schedules (time tables) to aid the comprehension of 'what will happen next'. The second approach is the Picture Exchange Communication System (PECS) which uses symbols for expression. Both approaches are implemented by specific teaching structures.

Symbols offer the potential for a high level developmental language skill equivalent to speech. Such as, a person who is able to read a sequence of symbols portraying a sentence and produce a sequence of symbols to express a phrase or sentence.

Finn Emmerson, Speech and Language Therapist. September 2000