

Boosting the visual and auditory memory (the subskills of learning)


## The sub-skills of learning

All skilled learning is built up piece by piece through practice until all the skills are integrated - like learning to ride a bike/drive a car. In order to develop successful literacy skills, the foundation skills that literacy skills depend upon must be strong. These are the subskills of learning - the starting blocks for future learning. There is little point in attacking reading and spelling skills if the sub-skills remain weak.

To read successfully our visual (seeing) and auditory (hearing) systems have to work together.

Listening combines hearing and thinking about sounds Looking combines seeing something and thinking about it

To achieve success with literacy skills every child needs:

1. To acquire, develop and practice:

- Auditory skills (listening)
- Visual skills (seeing)
- Short-term memory strategies

2. To use and combine these skills
3. To develop reasoning and logic


## Activities to boost Visual memory skills

AIMS

- to develop and apply visual memory
- to be able to recall a sequence of images, shapes and patterns
- to be able to identify missing details and replace them in a sequence
- to recall visual detail from a larger context
- to develop and apply visual discrimination
- to identify inconsistencies/errors in images
- to develop visual comprehension
- to develop the skill of scanning



## Games to boost visual memory

These have the advantage of making the practising of these skills fun where the child isn't aware that they are working or learning.

Kim's game - an array of familiar objects on a tray (or picture of an array of objects). The child scans this for two minutes (or whatever period of time is appropriate) and then has to remember as many as possible. Start off with 3/4 items to begin with then increase gradually to extend the challenge.

Matching Pairs (Pelmanism) - remembering matching pairs of cards from a set, when cards are individually turned over and then turned back. The child has to remember where the other one of the pair is, and if both are located these are removed from the set. The person with the highest number of sets of pairs at the end of the game is the winner.

Card games e.g. Snap, Happy Families.
Board Games e.g. Lotto, picture Bingo.


Jigsaws these help the child to see how parts fit together to build up a bigger picture. Try to discuss strategies with them rather than point them out. Build up the size of the parts as their strategies increase. Create your own from familiar books if possible. There are some available online.

Find the missing part - create pictures of everyday things with parts of the pictures missing (e.g. doll with one arm, table with only three legs) and ask the child to identify what is missing. To do this the child has to recall visual images of the relevant objects.

What's wrong here - use pictures of everyday things with parts of the pictures wrong (e.g. house with the door halfway up the wall; person with feet pointing backwards instead of forwards) and ask the child to identify what is wrong. To do this the child has to recall visual images of the relevant objects.

Who lives here? - make a set of pictures of people (these may be cut from magazines) and a set of houses of different colours, or different appearance in some way. The people are matched with the houses, and then jumbled up. The child has to rearrange them in the correct relationship. If the people are given names then the task becomes more verbal.

Symbols - show your child a sequence of symbols, letters or shapes of increasing length, and then jumble them up and the child has to rearrange them in the correct order. Remember that this can become more of a verbal task than a visual task - if you want to practice purely visual skills then it is best to use things which are less likely to be labelled verbally.

Online games - There are also a variety of games available online by searching for 'games to develop visual memory skills'.


These activities develop the children's ability to recall or identify precise, individual facts and details from a picture.

## Recall

Provide a clear, preferably black and white picture to start - from a colouring/ what's different book or online. Discuss what you are going to do -"We'll see things, think about them so that we can remember what we have seen."
Allow the child two or three minutes to look at it carefully. Take the picture away and ask simple questions that will require one precise answer e.g. How many..? Where..? Who..? Why..?

## Discrimination

Using a "What's wrong?" or "What's different?" picture - create your own or from a "Spot the difference" puzzle book or online. Encourage the child to give precise answers in full sentences and not just point to a difference and say "that one."

## Comprehension

The aim is to develop understanding of what they have seen by posing questions that require them to use clues from the context. e.g. in a picture with no sun etc. ask, "What was the weather like the day this picture was taken?" In a picture with a birthday cake with candles on it, ask "How old was the girl?"

## Associations

Using objects or pictures provide associations between pairs e.g. "here is a boy and here is a house, the boy lives in this house." or "this is a cat, this is a tree, the cat climbed the tree." Then separate the objects/pictures and see if your child can put them together again by remembering the associations. This helps to develop logical links between separate items which strengthens the memory. In time, encourage the child to provide the links themselves.


## Visual/physical sequencing

Model three physical movements (e.g. stamp feet, clap hands, tap nose) in a row and ask the child to remember and reproduce them.
Increase to four, five. movements as their ability to reproduce them increases. Some children will find this very challenging because it combines physical coordination skills as well-but it can be good fun.

## Structured Sessions

## Resources

An interesting selection of small everyday objects e.g.:

- Toys (cars, dolls house furniture, models, farm animals)
- Household items (spoon, clothes peg, comb, cup)
- Fruit/vegetables
- Stationary (pen, rubber, ruler, crayons)
- Coloured counters/buttons
- Pictures of objects

1. Start off with three objects/pictures in a row and ask the child to remember and reproduce them.
2. Place three objects in a row and rehearse the order with your child well. Then ask your child to close their eyes while you:

- remove one of them - can they name the missing one?
- swap two around - can they recall and restore the original order?
- muddle them all up - can they recall and restore the original order?

3. Increase the number of items presented gradually and repeat the above steps (4,5,6,7 ...)
N.B: you will need to concentrate hard - and even write notes - to help you remember the order accurately yourself as you increase!
4. Increase the number of items you remove.
5. Instead of placing the objects in a row, place them in a circle - this provides more of a challenge since there is no obvious start/finish point. You may need to reduce the number of items initially and then build up again. How ever, presenting them in a row is also important for rehearsing the left-toright eye movements as required when we read.
6. Close the gap when removing objects/pictures so that there is less of a clue to which object has been removed.
7. Put the removed objects/pictures back in a different position - can they identify this? Can they return them to their original positions?
8. Introduce more unfamiliar objects/pictures to increase the challenge e.g. garlic press, whisk, rather than familiar household objects; wild animals rather than farm animals, etc. This extends their vocabulary as well as in creases the challenge for the memory by introducing more of a verbal element.

Once children are adept at the above, the next step is to use letters instead of objects/pictures (see the next page for more details).


It is important to concentrate on the letter sounds rather than the letter names since this association is more useful in developing the correct relationships needed for reading.

It is also important not to introduce too many different letter sounds at the same time. The letters "s,a,t,p,i,n" are an ideal starting point. Adding the letters " $d, h, e$ " would be the second step once they are automatic with the first six.

An ideal resource for children who are at the stage of being ready to practice recognition of consonants and vowels is the TRUGS (teach reading using games) stage 0 card game box. This contains four different games which develop recognition. The first game limits the letters introduced to the "s,a,t,p,i,n" letters. This is available from: www.readsuccessfully.com

## Games to boost Auditory/verbal memory



Start with three or four items and build up as your child is able to. One item per second is the ideal time spacing for short sequences.

I went to the supermarket - you say to your child sentences of increasing length and complexity and your child has to repeat these back correctly (e.g. "I went to the supermarket and bought three tins of beans, one loaf of bread, a carton of milk, a packet of sweets, two bars of chocolate...." etc.)

Find the changed (or missing) word - you say a sequence of words to your child (e.g. dog, cat, fish, monkey, spider) and then repeat it changing one (or missing one out altogether), either slightly or more obviously (e.g. dog, cat, fox, monkey, spider) and the child has to identify the change.

What's their job? - you say a list of name-occupation associations (e.g. "Mr Pearce the painter, Mrs Jolly the grocer, Miss Fish the hairdresser, Mr Brown the electrician") and then ask for recall of one (e.g. "Who was the grocer?" or "What is Mr Brown's job?"). Occupational stereotypes are best avoided.

Word repetition - you say a sequence of unrelated words to the child (e.g. hat, mouse, box, cup, ladder, tree, biscuit, car, fork, carpet) and the child has to repeat them in the correct order. The length of the list can be gradually extended.

Letter sound repetition - as word repetition, but with letter sounds.

Digit repetition - as word repetition, but with digits.


## Opportunities to follow instructions

Either at home or when shopping, ask your child to remember and carry out instructions that involve a list to remember e.g. "Go upstairs and get me the hair brush, the comb and my handbag."

You can increase the challenge by sending them to different rooms/shopping aisles for the items.

## Activities to boost Auditory memory skills

## AIMS

- to develop and apply auditory (hearing) memory
- to be able to recognise and identify individual sounds
- to be able to sequence a series of sounds
- to be able to identify the initial, middle and final sound
- to use a symbol/picture to represent the sound

1. Ask the child to repeat a chain of random nonsense sounds e.g. Oo la la di dah, umpty dumpty wumpty (the sillier the better for gaining their interest).
2. Ask the child to repeat a chain of five or six loosely related real words/ rhyming words e.g bird...duck...pig...cow...horse
3. When the child is confident and experiencing success, use single digit numbers.

At first, the above items should be presented rhythmically, but you should aim to move on to presenting them in a monotone way with a second's pause between each item in the list.

An additional step is to introduce a distraction technique at some point as you present the list e.g. bird...duck...pig...(cough)...cow....horse. Other distraction techniques are to drop something on the floor, look at something outside the window etc. This provides more of a challenge for the memory.

## Combining skills

Repeat the auditory training steps with the child looking to combine the visual and auditory elements. If you can include physical movements this will make it more multi-sensory.


## Resources

- An interesting selection of small everyday objects that can be used to make a sound e.g: plastic spoons, coins in a tin, some keys, a whistle, a rattle etc.
- Individual pictures to represent the objects that make a sound.



## Identifying

1. Introduce four or five of your "sound makers" making sure your child can name each object.
2. Using the objects one at a time, ask your child to close his/her eyes, listen carefully and tell you which one/s they heard -if they find this difficult, let them watch for a while as you are making each sound.
3. At this point it is not important that they recall them in exactly the correct order. Simply comment on the order in a casual manner and as you're speaking, move the objects to form the correct sequence.
4. Repeat these activities, using different sounds each time until your child is able to recall about five or six sounds.

To isolate auditory memory make sure the child cannot see the objects (seat them facing away or hide the objects with a screen).

## Sequencing

1. Choose just three sounds, repeat the above activity and ask, "Which did you hear first?" "Which was the last sound you heard?" "Which sound was in the middle?"


## Decoding

This is the process of using a picture (a symbol) to represent the object. This is an important skill to develop for when they move on to letter sounds and shapes.

1. Repeat the previous activities but instead of using the actual objects, ask your child to demonstrate the order they heard the sounds in by using the pictures.


## Syllables

Developing an understanding of syllables (the beats in a word) is an important step in the acquisition of reading and spelling skills. Opportunities to acquire and rehearse these skills will enable children to decode long or unknown words with greater accuracy and confidence.

The number of beats can be identified through:

- Clapping
- Tapping the table
- Tapping their leg
- With a hand underneath the chin (because there is a vowel in each syllable, the jaw will drop as vowels
 are pronounced).

Clap or tap out the number of syllables in different words - model it for them first, then do it together, then as they understand the concept, get them to do it independently with:

1. One syllable words
2. Two syllable words
3. familiar words like the child's name
4. Words of varying syllable size


## Rhymes

Children enjoy listening to and saying rhymes and these activities serve to develop good listening skills:

- Encourage your child to match your word by starting a round of rhyming words.
- Play Snap or Pairs memory games with illustrated rhyming words.
- Provide a phrase for them to complete with a rhyming word
e.g. The pirate had a peg..? The big frog sat on the ..?
- Try getting older children to create their own rap songs.



## Thinking skills

Activities which encourage children to think about words generally is good development for their literacy skills. These can also be done on car journeys.

Ask the child to list:

- What would you see ..? (at the zoo, in the garden)

The next stage is to encourage them to think outside of the box e.g. What would you see in the zoo besides animals?

- Things that have buttons/zips/pips.
- What would you do with..? ( bucket, whisk, cushion)

The next stage is to encourage them to think outside of the box.

- Vegetables/transport/furniture
- As many things with beginning with a particular letter sound as possible in one minute.

List several words e.g. "Bed, dog, lead, cat" and ask the child, "Which ones can you link together? Explain more about why can you link them?"

## Early Phonological awareness

This is the ability to hear, identify, and manipulate the individual sounds in spoken words). Suitable games include:

I spy' - either conventionally (alliterative) or 'Rhyming I Spy'.
Word families - i.e. putting words in to families based on different sound components (e.g. made, paid, glade; flower, flan, flock; trip, grit, crab; tan, fat, sad).

Spot the difference - can your child detect the difference between similar sounding words (e.g. town-down, pat-pad, fag-sag, shot-shop)? Inserting some identical pairs in the game (e.g. show-show) encourages careful listening. If possible children should try to identify the difference as well as detect it.

Deletion of the first sound (e.g. 'near-ear') or of the last sound (e.g. 'partypart'), or of whole syllables (e.g. saying 'alligator' without the 'all')

Elision of the middle sound (e.g. snail-sail) or syllable ('alligator' without the 'ga').



The TRUGS resources that have been designed for use at home are very useful as your children will be practising their reading skills while playing games. The red Box 1 is the correct level for children who are receiving satpin intervention at school. The Tricky words packs are also useful for developing sight vocabulary of high frequency words. They are available from: www.readsuccessfully.com
trugs" Check decks to check phonics mastery, fluency and improve processing speed
trugs" Training to give greater depth and understanding to phonics with practical useful ideas

## Primary and Secondary Phonics



## trugs" products

## schools trugs"

 mainstres for \& 1:1 mainstreamtrugs at home boxes for parents and ideal for PP

Tricky Words decks for highfrequency words trugs Pics boxes for all students, ideal for EFL \& EAL

## trugs"at home



## Box 3

stage 11 ' $c$ ' as in $/ \mathrm{s} /$
stage 12 ' $g$ ' as in $/ \mathrm{y}$
stage 13 consonant Ie
stage 14 four syllables words
stage 15 suffix with 'ti' 'ci' 'si'

Words like: mice
Words like: gem
Words like: candle
Words like: independent
Words like: electrician

## What parents say...

truge is a fantastic resource. When my daughters were playing truge they were having so much fun that they did not realise they were learning at the same time. Karen Harding

The games are so simple to play, but the thinking behind them is so clever with the different games and the bright colours making them so inviting to youngsters. Jon Gerrard

