

Structured Support of Spelling: Using Routines (1)

This document looks briefly at a number of ways that cards and structured routines can be used to enhance the retention of word spellings. It is important to note that the routines involve making important facts about the phonemes (and graphemes) salient and involve explicit discussion of the key facts. Both of these elements enable the cards and associated routines to help learners achieve automaticity of recall (the fourth stage in Gombert's Model of Metalinguistic Awareness, 2003).

PART ONE:

Phonemic Directed Discovery

It is beyond the scope of this document to look at the phonemic directed discovery process in great depth. This section aims to set out the basic way of introducing a new grapheme-phoneme link to a learner using auditory clues (known as discovery words). Discovery words are chosen as they are good examples of the target grapheme-phoneme link. For example, 'pink', 'pigeon' and 'pomegranate' would be good discovery words for forging the link between <p> and /p/. But a word like 'phantom' would not be as the word does not start with the phoneme /p/.

Although the main focus of this process is upon generating the reading card (i.e. explicitly discovering and recording a new grapheme-to-phoneme link), it is important that you appreciate how this explicit process is built upon to introduce the associated phoneme-to-grapheme link e.g. the spelling of /d/ using the grapheme <d>.

There are three stages to the process:

1. The target discovery words are uttered by the teacher. The steps are set out in Table 1.

Table 1

Steps in the Routine: Using Auditory Clues	Rationale
Teacher says ¹ directed discovery words that illustrate the new learning point.	<ul style="list-style-type: none"> • So that the learner can hear the target sound embedded in words. • To encourage the auditory analysis of words and auditory discrimination of sounds.
Learner listens and echoes back.	<ul style="list-style-type: none"> • The learner utters words featuring the target phoneme as a stepping-stone to stripping away the extraneous information (i.e. all the sounds that are not the target phoneme). • The learner practises holding auditory information in memory.
Auditory focus (how the words sound): Teacher asks: "What sound is the same in these words?" (words can be repeated if necessary)	Learner's attention is drawn to the sound of the words – this encourages the analysis of the sound units within words

¹ Note with some learners you may need to use pictures of the target words to support memory.

Learner says the target phoneme in isolation.	Learner holds the words in memory, analyses them for a common phoneme and then isolates this from one of the words.
Teacher asks: "Where in the words did you hear the sound?"	This primes the learner for the matching of the grapheme to the new phoneme as it alerts him or her to the position of the sound within the word. This allows the learner to look at the list of words and locate the shared grapheme
Learner replies or teacher prompts or models...	This prevents the learner from feeling failure or uncertainty.
Teacher elicits a summarising comment: "So the sound is ... and you heard it at the ... of the words".	This sums up the learning for the learner and acts as a bridge to the discovery of the grapheme.

- The learner sees the words written down and listens to discover where in the words the common (target) phoneme occurs i.e. makes the link between the symbol and the sound. This is an important step for spelling as it focuses upon how words or sections or words look i.e. visual form. The steps are set out in Table 2.

Table 2

Steps in the Routine: Using Text-based Clues	Rationale
Visual focus (how the words look): Teacher shows a list of the words used in the discovery to the learner.	The list of words is carefully tabulated so that the target grapheme is in the same column).
Learner identifies the grapheme linked to the phoneme and highlights the grapheme in the target position in each word.	The learner finds the link between the grapheme and the phoneme him or herself.
Teacher elicits a summarising comment: "So the sound is ... and it is made by the letter at the _____ of the word". Or teacher can do a reminder: <i>What was our sound?</i> <i>Where did we hear it?</i> <i>What do you notice about these words?</i>	The learner summarises what has been learnt with reference to the phoneme (sound) and the letter (using the letter name) that makes it.
Teacher gives the new reading card to the learner, who adds a meaningful image to the back.	The reading card captures the knowledge gained and personalises it because the learner creates his or her own meaningful image on the back of the card as the 'cue' or stepping-stone to the retrieval of the phoneme.

The front of the card is pre-prepared by the teacher. The learner creates his or her own sketch on the back of the card - this is important as it makes the link meaningful to them. In rare cases where drawing will take too long or dexterity or motivation to draw is an issue clip art can be used, but again the learner must be centrally involved in its choice – to forge the meaningful link. Note that in the example of a reading card the writing on the image side of the reading card is for teacher reference only. It is not added there for the learner to read. It

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is useful to add this because sometimes the learner's picture is not clear enough for the teacher to recognise (the written prompt for the teacher is needed so the teacher can check if the learner is associating the grapheme consistently with the image featured on the card).

3. The information is captured on a reading card. Figure 1 shows the front and back of the cards respectively. This new link is practised using another structured routine (the reading card routine).

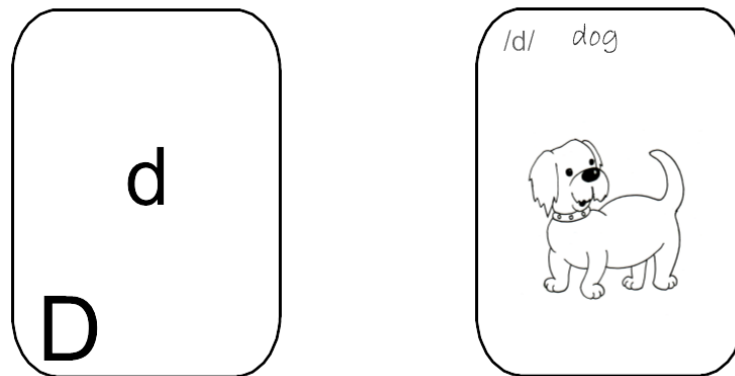


Figure 1

The reading card is used in two ways:

1. It is generated as just specified above, as part of a discovery process.
2. The card becomes the focus of a structured practice routine (the reading card routine), which is used to cumulatively practise new and previously discovered grapheme-to-phoneme links.

The Multisensory Links Routine

Once the new grapheme-to-phoneme link has been practised another structured routine is embarked upon: the multisensory links (MSL) routine. The MSL routine is an important part of the assimilation of the information needed to successfully generate the correct sequence of phonemes in order to generate the correct string of graphemes for spelling. The purpose of this routine is for the learner to discover the phoneme-to-grapheme-to-written-output linkage and this knowledge is captured in the spelling card. The routine can be based on the script or printed form of the grapheme – again this depends upon the profile of your learner and their requirements.



Teacher Question

Should I get the learner to use script or to print during lessons?

Advice:

- *Trying to impose cursive script on some older learners can be unwise and unproductive, though sometimes adults can welcome knowledge of the*

cursive forms. However, make sure not to get side-tracked on handwriting matters when spelling is the central focus of the task. This is also likely to be something that the learner has been picked up on time and time again, so it will be demotivating as well as poorly focused tuition. However, it is wise to find out what the handwriting policy is at school (if applicable) and to bear this in mind.

- *Careful thought needs also to be given to those who are reluctant writers or who have co-ordination/movement difficulties as can be the case in young learners with developmental coordination disorder (DCD/dyspraxia). Alternative methods of transcription can be sought, or the writing done in different media (on an iPad, and iPhone, in sand, with water pistols, in salt, letters can be stuck to Duplo or Lego and pushed onto a baseboard to spell out words etc.).*
- *If your learner is using script, it is important that you are clear about when script is used within the session. Script should only be shown to the learner:*
 - *When doing the Spelling Routine (as you will have chosen to show the grapheme in script form there for the learner to check).*
 - *When the MSL routine is being conducted.*
 - *When the learner is checking words after the ESWC Routine.*

That is, script is only shown when the learner is generating output in script that needs to be checked. This is because you need to supply the learner with a 'check' in the same form, otherwise you are asking them to do a translation to printed grapheme from the script symbol and people with dyslexia very often have a difficulty with processing symbolic material (especially at speed).

The steps in the MSL Routine and each step's rationale are given in Table 3. 'Sky-writing' is referred to in the table. This phrase means forming the shape of the letter in the air by using a whole-arm movement – holding the arm out straight out in front at right angles to the torso, then tracing the shape of the letter in the air. This is not suitable for all learners (for various reasons) but if the learner is not averse to the suggestion, it is often best to try this as some enjoy it and find it unexpectedly useful. It does give a larger motor movement to remember and this might support some learners' memory for the letter formation process.

Table 3

Steps in the Multisensory Links (MSL) Routine	Rationale for the Step
Teacher and learner stand side by side. Teacher prints lower case grapheme on board.	This gives the learner the print form of the grapheme – as met in books and other printed materials.
Teacher superimposes written form on printed form, saying phoneme then letter name – “/t/ is <t>”.	This demonstrates the link to the learner between the written form of the grapheme and the print form. This is important as the two can vary greatly and

	<p>this should not be taken for granted: it needs to be explicitly broached.</p> <p>It gives the learner the phoneme associated with the written form of the grapheme and the print form of the grapheme.</p>
<p>Learner looks at letter on board, sky writes the grapheme, saying the phoneme then letter name – “/t/ is <t>”</p>	<ul style="list-style-type: none"> • The learner is actively linking the grapheme, the phoneme and a larger version of the motor movement needed to form the letter. • This gross-motor kinaesthetic memory trace might be supportive to learners who have difficulties with aspects of their procedural memory (the memory for the order or process of doing certain task).
<p>Learner then traces over tutor copy on board, saying phoneme then letter name – “/t/ is <t>”</p>	<ul style="list-style-type: none"> • This gross-motor kinaesthetic memory trace is linked to the fine-motor equivalent needed to form the written form of the letter. • The learner has a letter to copy over; so that memory is supported i.e. learner not distracted worrying about how to form the letter.
<p>Learner copies the grapheme somewhere on the board or sheet of large paper, saying phoneme then letter name – “/t/ is <t>”</p>	<ul style="list-style-type: none"> • The learner has done the sky-writing, then traced over the letter shape and then attempts to form the letter independently. • The formation (the fine-motor kinaesthetic memory trace) is again linked to both the phoneme and the letter name.
<p>Learner writes the grapheme a few times, then finally with eyes closed, saying phoneme then letter name – “/t/ is <t>”</p>	<ul style="list-style-type: none"> • The learner can practice writing the letter to get the rhythm of the movement. • Writing with eyes shut focuses the concentration on the feel of the letter formation and links this formation to the phoneme (as it is uttered) and the letter name (as it is said). Having the eyes shut blocks out any extraneous information.
<p>Teacher can optionally ask the learner which of his letters is his ‘best copy’ and ask why he or she thinks so.</p>	<ul style="list-style-type: none"> • This focuses the learner’s mind on how he has written the letter.

	<ul style="list-style-type: none"> • The learner makes his or her own judgement about the fidelity of the copy of the letter produced. • This does draw attention to handwriting and might not be a desirable step for all learners. • It also focuses upon the positives for the learner as it raises discussion of what is good about one of the letters written.
Teacher practises Spelling Card Routine with Learner, using ready-made Spelling Card.	<ul style="list-style-type: none"> • This summarises the complex process and introduces the learner to the routine that will be practised during the Linking Routines section of the next lesson. • The card adds to the learner's pack of phonemes for which he or she can link to the appropriate grapheme.

Note that the spelling card is created by this process. The spelling card is prepared in advance by the teacher. It is the forging and rehearsal of the mantra (the verbal utterance that links the phoneme to the name of the letter/s) and the movement pattern that forges the ability to write the correct grapheme strings when spelling. Note that by extension the shape/visual form of the letter/s is a memorial element in both. As with the reading cards, the spelling cards used in two ways:

1. It is generated as just specified above, as part of a discovery process to capture new knowledge.
2. The card becomes the focus of a structured practice routine (the spelling card routine), which is used to cumulatively practise new and previously discovered phoneme-to-grapheme links.

The Spelling Card Routine

Each step in the spelling card routine acts as a foil for memory. This is why the steps in the routine are important and why such emphasis should be placed upon the accurate performance of them. The stages of the spelling routine are set out in Table 4:

Table 4

The Steps in the Spelling Routine	The Rationale for the Step
Teacher hold cards and says "Look at my mouth and repeat after me..."	Because learner needs to see the correct articulation of the phoneme and copy the speech action to create the phoneme for him or herself.

Teacher says the phoneme.	Because learner needs to hear the pure sound (i.e. without the schwa).
Learner echoes sound then says the letter name /t/ is <t>.	Because learner needs to utter the phoneme correctly to trigger the link to the letter name.
Learner writes repeating “/t/ is <t>” whilst writing.	The letter name triggers the kinaesthetic memory to produce the written output.
The tutor shows the card to the learner.	So, the learner can self-check and gain a sense of independence rather than having work ‘marked’.

The spelling card routine works because it forges a memory link between the phoneme, the letter name and the movement pattern used to generate the grapheme. It also encourages spelling by letter name string (rather than phoneme string) – this is the best procedure to use in order to spell accurately in an opaque orthography such as English.

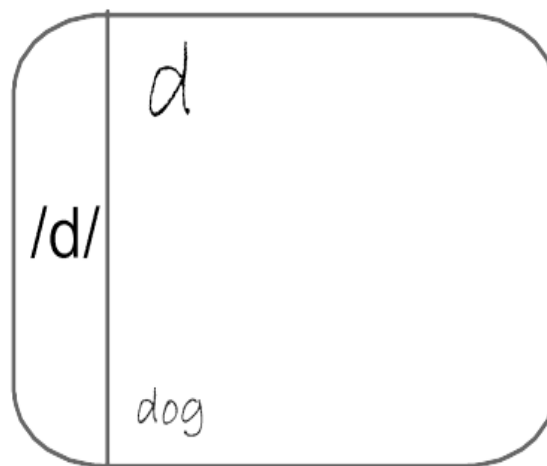
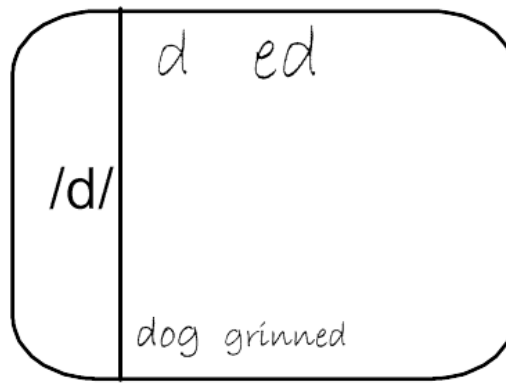


Figure 2



Note that in the example of the spelling card (Figure 2), it is the writing at the top of the card that is for the learner to read i.e. the written graphemes that are associated with the phoneme. The reference word at the bottom is not so important early on, but later when mantras get more complex, the teacher needs a reference to the particular example word the learner is using to specify the spelling choice so that spelling choices can be differentiated where necessary. In the example given (Figure 2), the teacher would be able to clarify that /d/ was written using the letter <d> in the exemplar word ‘dog’. Later on, another spelling choice for the phoneme /d/ will need to be added (/d/ as <ed> in words like ‘grinned’, ‘filmed’ etc.) in this later case, because of the presence of the reference word at the bottom the teacher would be able to cite both instances. The mantra would then run something like: /d/ is <d> (as in ‘dog’); /d/ is <ed> as in ‘grinned’. See Figure 3 for an example of this. Note that the < > symbol encloses the grapheme – how the sound is written, when saying the mantra it is always the letter names that are said to represent the grapheme.

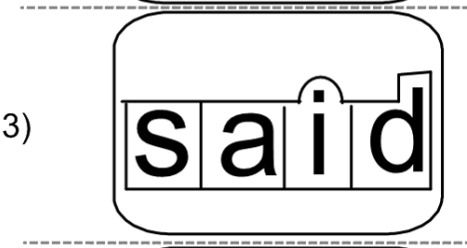
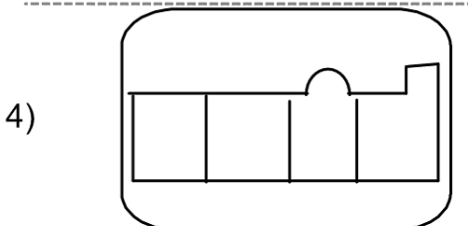
**Figure 3**

Using the Elevator Word Spelling process.

In the Dyslexia Action Literacy Programme (DALP), from which these examples of structured approaches to spelling are taken, the term ‘elevator words’ is used to replace two terms: ‘sight words’ and ‘high frequency words’. A suggested format for the introduction of elevator words is given in Table 5. Note that the illustrations are steps in a single worksheet that is folded so that only one of the stages is seen at a time.

Table 5

Elevator Word Spelling: Steps in the Process	Sections of the worksheet
1. The word is shown and read aloud – either by the practitioner or the learner (as appropriate). The features of the word can be discussed.	1) 
2. The learner draws around the word to create a ‘skeleton’ of it.	2) 

<p>3. There is discussion of the letters within the words – <i>primarily using the letter name as a key point of focus.</i></p> <ol style="list-style-type: none"> The learner boxes off each of the graphemes. The learner rehearses the letter string aloud (<i>using letter names</i>), pointing to each in turn and saying the word initially and then finally. 	
<p>4. The learner enters the graphemes in the box diagram saying the letter names as he or she goes. NB: 'enters' means either the grapheme should be written or it can mean 'puts the appropriate wooden grapheme' or 'puts the appropriate letter card' or indeed 'puts the digital form of the grapheme' into the boxes. For several reasons you might not want the learner to actually write the word during this process, and, conversely, sometimes learners are reluctant to write, so using analogues of the written grapheme is an acceptable alternative way of approaching the task. It is the utterance and sequencing of the letter string that is of prime importance.</p>	

Rehearsal of Elevator word Spellings

The spelling of elevator words can be rehearsed in a variety of ways, using different media, but the steps in Table 6 should feature in the rehearsal process.

Table 6

The Steps in the Elevator Word Spelling Rehearsal	The Rationale for the Step
Teacher reads a short sentence featuring the elevator word and repeats it at the end.	To give the learner information about the meaning of the word.
Learner echoes the word.	Because learner needs to say the word to trigger the correct string of graphemes when he writes.
Learner says the letter string.	To rehearse the names of the letters he is about to write or order.
The learner writes as he says each letter name.	<ul style="list-style-type: none"> To ensure the learner knows the letters used to build the word. No reference is made to phonemes in this process.

Or, the learner builds the word from a given set of wooden letters.	<ul style="list-style-type: none"> • If building the word from wooden letters, a pre-selected set of the necessary letters should be given. • The learner can refer (by repeating or describing) his or her strategy for spelling if they have one. (E.g. "There's a rat in separate").
The teacher gives the learner a copy of the word.	So, the learner can self-check and gain a sense of independence rather than having work 'marked'.

Word boxes could be used as part of the rehearsal/revision process (as in Figure 4). There are advantages to this method as the structure of the boxes gives the learner additional prompts. The learner is given a sheet featuring a couple of empty word boxes to write in, or in addition given set of wooden letters per elevator word, so that the learner has to push them into the appropriate box whilst saying the letter name.

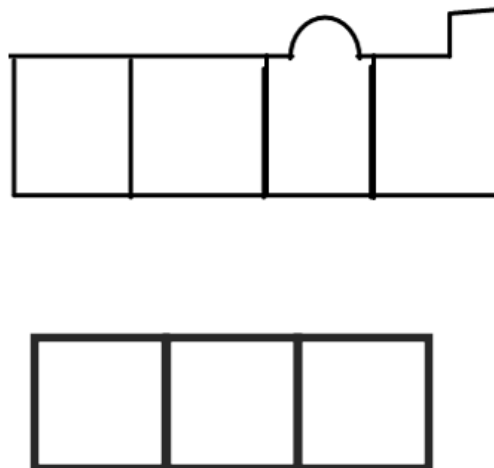


Figure 4

The boxes would be on a sheet that would be folded so that only a word at a time was seen. The top box is for 'said', the bottom one for 'are'. Think how the structure of the box would help the learner to remember that 'said' is made up of four letters, rather than the expected three and to remember that 'are' is made up of three letters, rather than one. Alternatively, the 'tutor pack' method could be used, this enables visuals to be used as a memory prompt. Carefully look at the examples in Figure 5. Notice how using the tutor pack also involves the reading of the word (if print rather than script is used in the self-check).

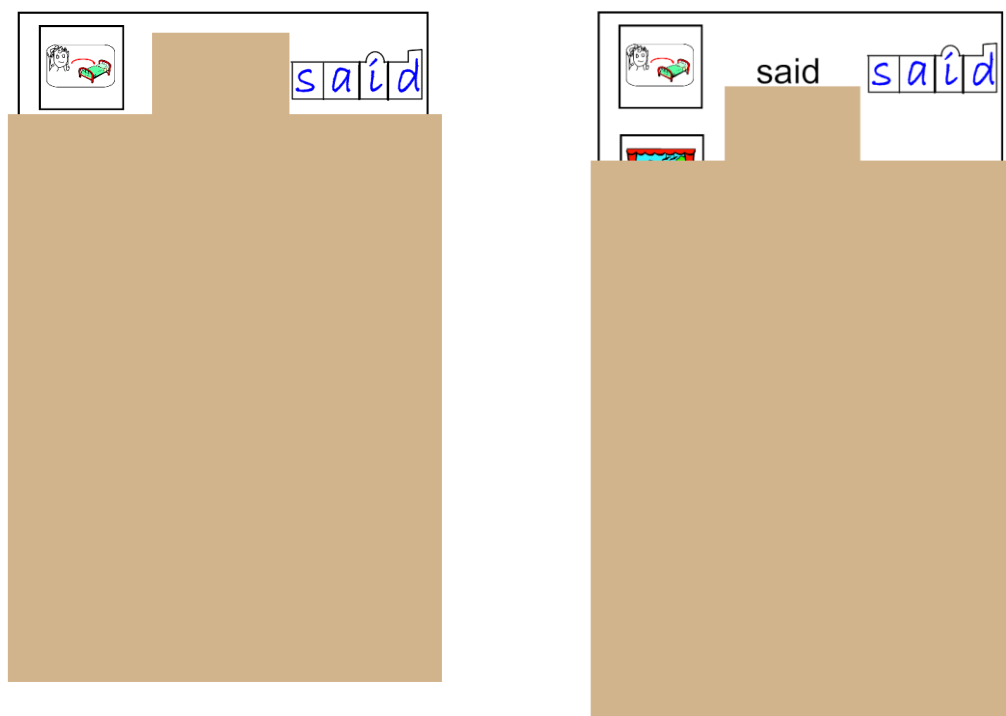


Figure 5

Reinforcing and Practising Word Spelling

This means that all of the words used in this section must fulfil one of the following criteria:

- Contain only phoneme-to-grapheme links that have been previously encountered (that is, they must be in-structure words).
- Be elevator words that have been previously met by the learner in a structured way.
- Be words (or phoneme to grapheme or grapheme to phoneme links) that have been shown to be secure during the placement process.

It must be emphasised that the presence of words featuring out of structure phonemes must be avoided, as the learner needs to develop confidence that only words that he or she is capable of reading and writing will crop up during this section of the lesson. This ensures that anxiety at possible failure does not distract the learner or cause a memory blank – thus threatening the whole process of consolidation that should be inherent in every aspect of this section.

There are certain elements that must be present in this section. These can take different forms and include a variety of tasks. Do try to vary the format used. The key elements that must in some way or another be included are:

- Single word reading (so that the new learning point is practised within single words and alongside previously learned phonemic learning points).
- Sentence reading (so that the new learning point is practised embedded within the structure of sentences).
- Word spelling following the Echo, Spell, Write, Check Routine (ESWC) (to demonstrate the ability to write words featuring the new learning point and previously learned phonemic learning points).
- Sentence dictation (so that knowledge of the new learning point can be demonstrated in written form at sentence level).

This is done using two more key routines that build the ability to automatically generate the correct graphemes from given phonemes. Let's look at these in turn.

Echo Spell Write Check Routine

Firstly, there is the Echo Spell Write Check routine, often abbreviated to ESWC. The steps in this routine are set out in Table 7.

Table 7

Steps in the Echo, Spell, Write, Check Routine	Rationale for the Step
Teacher asks learner to look ² at her and says the word to be written	The learner's attention is focused on the task in hand.

² Please note, that this might not be suitable for all learners. For example, learners on the autism spectrum. Adjust accordingly to suit each learner.

Learner looks at tutor and listens	The learner sees the articulation of the word as it is said. This can be important as it should generally provide the learner with useful additional cues to the constituent phonemes.
Learner echoes the word	<ul style="list-style-type: none"> • This also checks that he or she has heard the word correctly before the spelling is attempted. • The learner's reproduction of the target word can reveal slight articulatory and auditory discrimination difficulties, which can inform future lessons. • It is important that the learner begins to generate spelling from his own utterance of words as this is part of the process of automating spelling skills.
Learner spells the word aloud using letter names	<ul style="list-style-type: none"> • Only letter names are uttered as the use of these forms the one consistent method of correctly spelling any word in the English Language. • Because of the work done in the MSL Routine and in the Spelling Card Routine, the letter name cues the correct letter formation for each grapheme-phoneme pair in the word.
Learner writes the word naming each letter as he writes it	The utterance of the letter name quickly unlocks the writing of the graphemes in the word, because the learner has been primed (his memory made ready) by the rehearsal of the letter strings at the previous step.
Learner checks word against tutor model	<ul style="list-style-type: none"> • The learner takes control of his own learning • There is no teacher judgement as to whether it is the correct spelling or if there are grapheme-phoneme mismatches within it as the learner checks it him or herself. • This is a valuable beginning of proofreading skills, which can be developed in the Applying Slot of future sessions if appropriate.
Learner reads word whilst looking at its correct spelling.	<ul style="list-style-type: none"> • This summarises the process with reference to the correct (or corrected) form of the word. • It links the decoding of the word (reading) with the encoding of the word (spelling) in a way that can be beneficial for future learning as patterns in the orthography can be assimilated.

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One very useful resource, which can be used once the learner has mastered the basic ESWC routine, is the tutor pack. This gives the learner greater independence and it automates the checking process, speeding up the time the reinforcement will take. An example of the pack in use is shown in Figure 6. Full instructions about how to make and employ the tutor pack are given on Moodle.

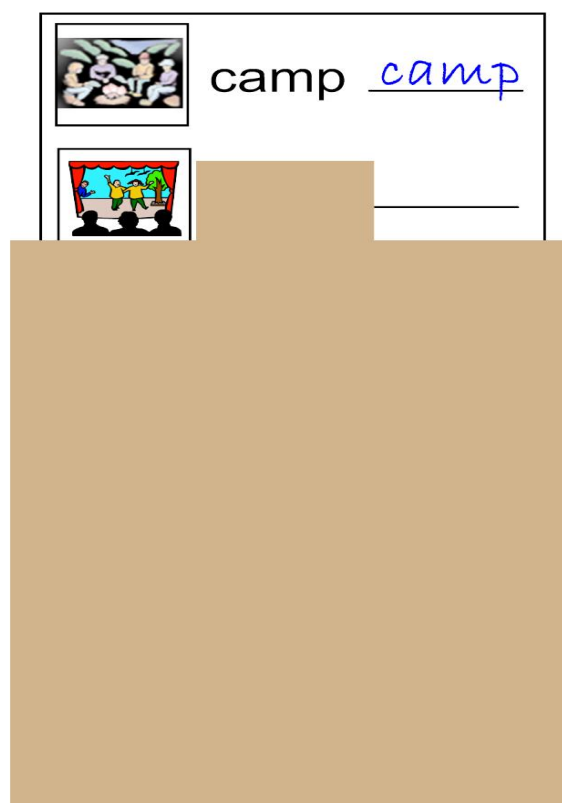


Figure 6

Sentence Dictation Routine

The second routine that is used to reinforce the learner's knowledge of the phoneme-to-grapheme and grapheme-to-phoneme links for the new learning point is the Sentence Dictation Routine. The steps in this routine are set out in Table 8.

Table 8

Steps in the Sentence Dictation Routine	Rationale
Teacher reminds the learner to look at him/her and listen carefully.	This trains the learner to listen to a series of words knowing that they need to be remembered exactly for later use.
Teacher reads the sentence aloud as learner looks at tutor and listens.	
Learner echoes the sentence.	<ul style="list-style-type: none"> To ensure that the sentence is held in memory correctly

	<ul style="list-style-type: none"> To help the learner rehearse what has been heard and to keep it cycling in memory.
Learner repeats the sentence again (or more than once if necessary).	To give further opportunity for rehearsal in memory before simultaneous writing begins (as this involves splitting attention).
Learner writes the sentence saying each word as he writes it.	<ul style="list-style-type: none"> The learner cues the spelling of the word automatically when the word is uttered. This automates the link between the phoneme and the direct spelling of the grapheme without reference to the constituent letters within the word. It is the final cumulative step in the following chain: the MSL Routine, the Spelling Card Routine, the ESWC Routine. Each routine builds cumulatively upon its predecessor for each phoneme introduced.
If learner has a self-check for punctuation, he should use this before checking against the tutor's copy.	<ul style="list-style-type: none"> This gets the learner into the habit of looking at features of writing like punctuation. In the longer term this will develop into self-monitoring and proof-reading. This promotes independence.
Learner checks sentence against tutor model.	<ul style="list-style-type: none"> The learner takes control of his own learning There is no teacher judgement as to whether the sentence is correct in its components (spelling, punctuation, no omissions or additions etc.) as the learner checks it him or herself. This is a valuable beginning of proofreading skills, which can be developed in the Applying Slot of future sessions if appropriate.
Learner reads the sentence aloud all the way through.	<ul style="list-style-type: none"> This summarises the process with reference to the correct (or corrected) form of the sentence. It links the decoding of the words (reading) in the sentence with the encoding of the words (spelling) in the sentence in a way that can be beneficial for future learning as patterns in the orthography can be assimilated. It provides a further sentence reading that includes the new phonemic learning point.