

**NADIIA**  
**Narrative and Discourse Intervention in Aphasia**

**INTERVENTION PROTOCOL**  
**Individual and Group Delivery**



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\*\* Published earlier as NARNIA (a Novel Approach to Real-life communication: a Narrative Intervention for Aphasia) (Whitworth et al, 2015; Whitworth et al., 2017; Whitworth et al., 2020).

\*\* Initial templates were contributed to by Vanessa Wolz, Research Assistant to the RCT (Whitworth et al., 2015). Free download of resources is available from <http://nadiiatherapy.com>. The protocol and resources are currently under review as part of the NADIApp Project and will be available from the website when completed.

## 1. Introduction

Narrative and Discourse Intervention in Aphasia (NADIIA) is a multilevel intervention that integrates robust therapies for words and sentences into naturalistic discourse contexts (e.g. giving opinions, story-telling, explaining). While targeting language abilities that are used in the everyday communication of daily life, NADIIA simultaneously draws on the cognitive underpinnings of language, e.g. planning, sequencing, prioritising. Taking a metalinguistic approach, NADIIA introduces discourse frameworks that provide a scaffold for the different types of speaking needed to communicate every day. These are coupled with highly salient, individualized topics that are intended to create a bridge to improve communication in daily life. This approach has been used with promising results with people following post-stroke aphasia (Whitworth, 2010; Whitworth et al., 2015), traumatic brain injury (TBI) (Whitworth et al., 2020) and primary progressive aphasia (PPA) (Whitworth et al., 2018).

## 2. Aims of intervention

NADIIA aims to promote increased *structure in connected speech* through focusing on *sentence and discourse frameworks* in recalling and planning exchange of information by:

1. identifying the event (action) level of episodes to (a) form sentences and (b) create structure within different discourse genre (e.g. narratives, recounts, procedures, and opinions)
2. identifying and selecting main verb within each event
3. creating complete verb argument structure (VAS) around each verb with focus on completing sentences
4. using frameworks to plan discourse production (across a range of everyday discourse genres) and prepare the order of spoken output
5. encouraging specificity and diversity (richness) of lexical selection
6. encouraging use of connectors to link sentences semantically (e.g. temporally, causally).

It is anticipated that the increased structure provided by the sentence and discourse frameworks will increase lexical selection, sentence production and discourse organisation.

## 3. NADIIA Principles

NADIIA is underpinned by the following principles.

1. A *multilevel* intervention that builds on what we know about word retrieval and sentence production and then places these into a discourse structure.
2. A *metalinguistic* approach to develop conscious awareness of sentence and narrative structure
3. Focus on the centrality of *main event* with identification of main verb and building of the verb argument structure (VAS)
4. Provision of a sentence framework for *lexical selection*
5. Use of both divergent (mind mapping) and convergent (sentence/narrative structure) processes
6. Inclusion of *different genres* (e.g. narratives, event recall, event planning, opinions)
7. *Self evaluation* using rating scales.

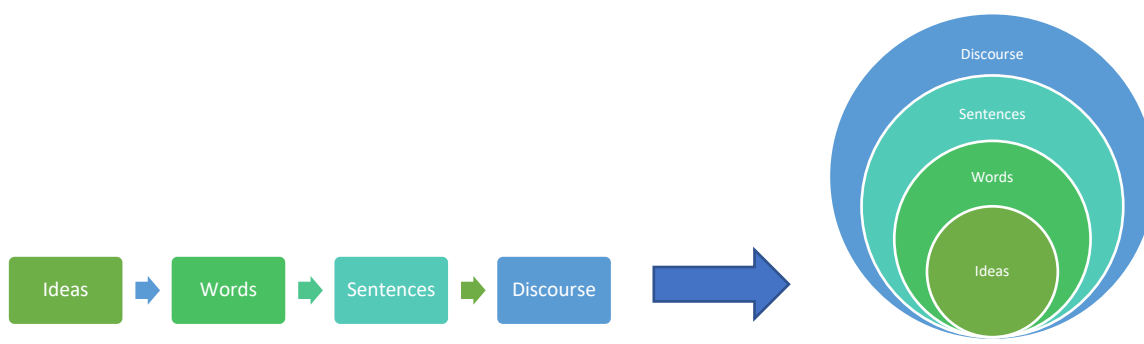
#### 4. Everyday discourse genres

Four everyday discourse genres are introduced in the program. These are (1) narrative (2) recounts (3) procedures and (4) opinions. Each genre has a unique structure (based around 'story grammar') but with similarities that can be loosely divided into 'beginning', 'middle' and 'end'.

#### 5. Therapy Progression and Components

The progression of NADIIA therapy through word, sentence and discourse levels is set out below. Although it is useful to start sequentially, the structure of the intervention process should be considered **concurrent** rather than **sequential**. The therapist can and should reiterate the importance of word and sentence level building throughout the therapy and can re-refer to any level at any stage, based on the needs of the individual client.

Start sequentially...



The clinician and client can move between levels as appropriate and needed.

The therapy tasks are progressed at a pace that is appropriate for the individual client, with the overall expectation that all genres will be covered during the 20 sessions and individuals will have had maximum practice.

The recommended order of genre is to begin with **narrative**. Narratives are introduced initially as these have a well-known structure, with the other genre introduced in turn from recounts (which are usually personal narratives), to procedures, to opinions. It is important that these genres, once introduced, are revisited with a relatively fluid flow between the different types. Once the genres have been introduced, it would be usual to work on approximately 2-4 discourse topics per session. This will depend on the client and the richness of the discourse topic.

Within each topic, there are three levels to develop and reinforce. As the narrative genre is introduced first, the components are discussed here in terms of this aspect of the protocol.

## **Beginning with Narratives...**

### **(a) Word Level**

This stage involves brainstorming verb and noun associations for each individual picture (as in the case of the narrative resources). These are written down and will later be written onto the mind map template.

Although the picture cards are initially presented in a sequence, the first step is to actively break down the task so that pictures are addressed one-by-one, with the focus being on generating the verb to describe the picture. This has three purposes:

- to increase metalinguistic awareness that the building blocks of a story are its events
- to highlight the central role of the verb to describe an event
- to reduce the cognitive load by focussing on single word responses.

This strategy draws on Levelt's model of language processing (1993) where the conceptualizer level (a pre-linguistic aspect of planning for production) focusses on the action of an event, followed by the retrieval of the lexical representation, i.e., the verb, and the corresponding nouns. For an overview of Levelt's model, see Appendix 1.

### **(b) Sentence Level**

Words are then inserted into sentences using the sentence frames (verb argument structure [VAS] frames) (see Appendix 2). Having brainstormed verb and noun associations for each picture, sentence structures are developed around one, two or three argument frames. Use of the VAS tables is:

- to highlight that sentences have a particular order in their argument structure and that all arguments are necessary to make a sentence accurate
- to reduce task complexity for those with VAS difficulties
- to bring awareness to the importance of complete sentences. Non-obligatory arguments (e.g. where, when, with what) may be added which will involve varying degrees of complexity.

Generating single words and making the verb argument structure explicit are key processes occurring between the Message and Functional levels of Garrett's (1982) model of sentence processing. For further information on each level of Garrett's (1982) model, see Appendix 1.

### **(c) Discourse Level**

Discourse requires planning of ideas, sequential ordering of information, and a structure for inserting relevant vocabulary (e.g. character names, specific verbs). These skills can be grouped into two distinct levels; microstructure and macrostructure. Microstructure refers to the linguistic level aspects of narrative discourse and encompasses lexical retrieval and grammatical encoding (at the word and sentence level). Macrostructure refers to the overall structure of the narrative including links between sentences (cohesion) and topic maintenance (coherence).

Our ability to participate in conversations relies on our ability to use the four main discourse genres; narrative (fictional), recount (personal narrative), procedure, and opinion (factual). Whilst each genre varies slightly in their inherent structure (this is discussed further below), all require integration of the syntax and semantics of language, the logical ordering of events and a sensitivity to the listener, that is, the micro and macrostructure (Cohen, 2001). Those features focused on

within this protocol broadly fall into the beginning, middle and end of the narrative and are presented in Table 1.

Beginning	Middle	End
Title or main gist (e.g. this is about...")	Main event OR Series of events that may build up to a high point	Ending
Setting the scene - Who? – characters Where? – setting/location When? – time	Linking words that relate to time	Closing sentence  (possibly) Reactions/own feelings  (possibly) What might happen next?

**Table 1. Common features of Macrostructure**

Levelt’s model of language processing sets out how the pre-linguistic processes at the level of conceptualisation are crucial for developing appropriate discourse structure. During this stage, the speaker must plan and order the information required to convey their communicative intention and sequence these ideas in a way specified for particular moods and contexts. Levelt refers to this process as macroplanning. If the pre-verbal message has not been planned or encoded for accurate and specific content, this incomplete or inefficient input to the formulator level would lead to the activation of aberrant lexical items selected and syntactic building procedures. For more information on Levelt’s model, see Appendix 1. NADIIA attempts to make this process explicit by developing an awareness of the four different frameworks using Mind Maps (Buzan, 1991).

**Mind Maps** are diagrams used to retrieve and link ideas, events and words in a way that can then lead to the organisation and planning of thoughts for subsequent production. Mind Maps are used to (a) plan narrative sequences (b) recall events (c) discuss opinions/ideas/beliefs and (d) plan tasks/procedures, i.e. the four genres of discourse in the program. Mind Maps for each genre can be found in Appendix 3.

**6. Self-evaluation**

Increased awareness and self-monitoring of performance are critical components of NADIIA. Rating Scales are used to draw attention to the features of success in sentences and overall structure. These are initially used after each discourse task as a support tool to increase awareness and self-monitoring. Once a participant is familiar with the tasks, the clinician can decrease this support but should continue to use them intermittently. This will vary across diagnostic and individual profiles, depending on residual cognitive skills and the needs of individual participants. Please see Appendix 4 for the template.

Self-monitoring is also a crucial element of Levelt's model of language processing. Like conceptualisation, this is a highly controlled process, which gives speakers access to their internal and overt speech. Speakers must monitor at all levels (word, sentence and discourse) for accuracy of word retrieval, order of arguments, inclusion of discourse components, as well as contextual appropriateness, allowing them to stop when they make a mistake and to initiate repair if appropriate / necessary. This process helps to maximise the efficiency and effectiveness of the communicative process and is therefore also a critical element to the NADIIA intervention approach.

## **7. Therapy Plans**

Therapy plans are included below. These can be used flexibly and are designed, along with the information included in Appendix 3, to be used according to the information in (5) Therapy progression and components.

As with much of therapy, NADIIA is based on PRINCIPLES and it is the PRINCIPLES THAT MATTER!

### **Please note...**

- Any appropriate picture sequences can be used that are available in the clinic to generate narratives.
- Any appropriate social scenarios can be used to generate opinions.
- Some clients prefer not to use picture supports when discussing topics within the different genres.
- Most clients are supported by the mind maps.

## Therapy Plans

Introduction to Narratives - Getting the Gist			
Narrative Resources: 3-8 event picture sequences			
Goal	Task and Instructions	Support	Criteria for success
1. Getting the gist For participant to <b>identify the gist</b> of a narrative sequence (increasing in length 3- 8 event sequences)	Task 1. Using 3 picture sequences, look at all pictures in order and decide what the overall gist or topic is. Aim to give it a name/title. This is the 'big idea'.  <i>Decrease:</i> Organise into a correct sequence to reinforce the temporal and consistent nature of events  <i>Increase:</i> 4 picture sequences up to longer sequences. Only progress as long as it takes to be confident with the sequential order of events	Emphasise the correct order of events if needed.  Reinforce the importance of having a beginning, middle and end where certain events must follow another for the story to make sense.	The gist can be reached in collaboration
Level 1: Word Level			
Sheets to write these on. These will progress to the mid maps once introduced.			
Goal	Task and Instructions	Support	Criteria for success
2. Word level	Tasks: 1. Identify the event (this is important)	Complete pictures one by one  Write down list of words produced	One verb and associated nouns identified for each

<p>For participant to <b>generate verbs and associated nouns</b> related to picture cards</p>	<p>“What is the action here? What are they DOING?”</p> <ol style="list-style-type: none"> <li>2. Identify the VERB</li> <li>3. Identify the NOUNS</li> </ol> <p><i>Decrease step:</i> Use errorless learning wherever this is needed. Therapist can provide words.</p> <p><i>Increase step:</i> Identify adjectives (for high level patients only)</p>	<p>Provide phonemic and semantic cueing as needed by participant</p> <p>Prompt with “wh-“ questions to elicit remaining elements to make complete sentence, emphasising ACTION to ensure you have all the components for sentences.</p> <p>Note. If the participant is having difficulty understanding the concept of events, repeat this goal with further pictures sequence cards, increasing in length when patient achieving success. You may move up to Mind Map to reinforce broader framework and then work back again.</p>	<p>picture. This can be more.</p>
<p><b>Level 2: Sentence Level</b></p>			
<p><b>Sentence templates. As above.</b></p>			
<p><b>Goal</b></p>	<p><b>Task and Instructions</b></p>	<p><b>Support</b></p>	<p><b>Criteria for success</b></p>
<p>3. Sentence level</p>	<p>Tasks:</p> <ol style="list-style-type: none"> <li>1. Combine nouns and verbs (and adjectives) into sentence frames.</li> <li>2. Write them down.</li> </ol>	<p>Use VAS template in Appendix 2 to write down sentences generated in appropriate boxes (N, V, N).</p>	<p>Complete written sentences appropriate to each picture</p>



<p>For participant to combine words to <b>form complete SVO sentences (N+V+N)</b>.</p> <p>These can become more complex with <b>additional arguments</b></p>	<p>Script: "Let's put those words together to make sentences."</p> <p><i>Decrease step:</i> Use errorless learning wherever this is needed. Therapist can provide words.</p> <p><i>Increase step:</i> These can be more complex with additional (non-obligatory) arguments, depicting 'when', 'where', 'who with', 'what with', etc.</p>	<p>For those participants who produce single words or incomplete sentence level, prompt using cues for <i>actor</i>, <i>action</i> and <i>what</i> to ensure sentences are <b>complete</b>.</p> <p>If participant is producing full sentences (i.e. VAS is not impaired), write them (in full form, do not paraphrase) into the space for sentences, highlighting the nouns and verbs. Stress the role of the ACTION/ VERB.</p>	
<p>4. (After Discourse Frame has been introduced) Introduction of linking words at Sentence level</p>	<p>Tasks:</p> <ol style="list-style-type: none"> <li>1. Discuss different linking words to connect sentences.</li> <li>2. Sentences: can read aloud series of complete sentences that describe the narrative sequence, then try different linking words.</li> </ol>	<p>Providing cueing as needed by participant to support reading aloud.</p> <p>Review sentences with participant by reinforcing sentence structure– main event concept → verb → nouns → complete sentence</p> <p>Use linking words to link events together in a meaningful way. This may be to create a sense of time, e.g. "And then..." or <i>how</i> and <i>why</i> events are linked and the roles of the characters, e.g. "however, and so, when he'd finished,</p>	<p>Identify and use linking words between sentences.</p>

		because”. See conjunction sheet for more ideas (appendix 4).	
<b>Level 3: Discourse level</b>			
<b>Mind Maps, self-rating sheet, 2x plastic sleeves, whiteboard marker &amp; eraser</b>			
<b>Goal</b>	<b>Instructions for participant</b>	<b>Support</b>	
<p>5. For participant to generate <b>introduction</b> to <b>narrative</b> using mindmaps</p> <ul style="list-style-type: none"> <li>- title</li> <li>- where</li> <li>- when</li> <li>- who</li> </ul>	<p>Tasks:</p> <ol style="list-style-type: none"> <li>1. Introduce narrative mind map. Introductory script: “All of these stories have some features in common. They all have a beginning, middle and end. We will use these Mind Maps to make sure you have included all elements needed for a complete story”.</li> <li>2. Revisit the gist/title. Script: ‘Think of a title that captures the main gist of the story.’</li> <li>3. Focus on ‘beginning’: “The pictures show events happening but if it’s a story, it needs an introduction. You need to set the scene.</li> </ol>	<p>Use probing questions to cue for title, where, when, who.</p> <p>Use sentence supports from Stage 1 to generate complete sentences to “set the scene”.</p> <p>Provide visual support by writing responses directly onto Mind Map.</p>	Identifies gist and ‘beginning’ elements
<p>6. For participant to generate <b>events</b> using mindmaps</p>	<p>Tasks:</p> <ol style="list-style-type: none"> <li>1. Focus on ‘middle’. Script: “Each story has a <u>middle</u>. What are the events that happen in this story?”</li> </ol>	<p>Use probing questions:</p> <ul style="list-style-type: none"> <li>- Was there an INITIATING EVENT?</li> <li>- What motivated the sequence of events?</li> </ul>	Identifies events

	<i>*As a general rule, use past tense.</i>	<p>- Think about WHAT HAPPENED at each point. Is there a HIGH POINT?</p> <p>- WHY?</p> <p>Use sentence supports from Stage 1 to generate complete SVO sentences, again highlighting the importance of the verb.</p> <p>Provide visual support by writing responses onto mindmap</p>	
7. For participants to <b>link events</b> using connectors	<p>Task:</p> <p>1. Discuss different linking words to connect sentences.</p> <p>Script: "Let's use one of these words to link the events. They make the story flow better."</p>	<p>Provide written list of connectors (Appendix 5)</p> <p>Provide assistance (e.g. forced choice) if participants makes inappropriate selection</p>	Identifies connectors and uses them to connect sentences
8. For participant to generate appropriate <b>ending</b> to narrative	<p>Tasks:</p> <p>1. Focus on 'end'.</p> <p>"Each story has an <u>ending</u>. How do we know the story has finished?"</p>	<p>Use probing questions to identify and reinforce the ending</p> <p>- Is there a resolution? Or is it the final event in the sequence?</p> <p>Use probing questions to reflect</p> <p>- What do you think could happen NEXT? What is YOUR REACTION to</p>	<p>Identifies endings.</p> <p>Identifies all components and develops a rich narrative.</p>

		<p>the story or episode? Is there a MORAL?</p> <p>Use sentence supports from Stage 1 to generate complete SVO sentences, again highlighting the importance of the verb.</p> <p>Provide visual support by writing responses onto mindmap</p>	
<b>Level 4: Evaluation</b>			
<b>Rating Scale</b>			
<p>9. For participant to accurately <b>reflect</b> on performance</p>	<p>Task:</p> <p>1. Reflect on all elements using the Rating Scale after each attempt of a discourse. Script: "How did you go? Where would you rate yourself on this scale?"</p>	<p>Participant to score their performance on Rating Scale (Appendix 4). Clinician to provide feedback and discuss where self-ratings differ from clinician ratings.</p>	<p>Able to reflect on each of the components</p>

*Reminder:* Overarching goal: For participant to develop metalinguistic understanding of different discourse frameworks. Participants should be familiar with building their stories using the word -> sentence -> discourse level steps. The focus of this level is to integrate this knowledge and apply it to different types of discourse, ie procedural narratives, personal narratives, and providing opinions.

Repeat each type of discourse a number of times before moving to the next goal to ensure the participant is familiar with the framework required for each type of discourse.

“So far, we have looked at telling stories. There are other types of conversations we have where we give opinions, tell people about something that has happened to us, and making plans. For each of these types, the mind map differs slightly.”

<b>Introduction to Recounts (Personal Narrative)</b>			
<b>Recall personal events</b>			
<b>Goal</b>	<b>Task and Instructions</b>	<b>Support</b>	<b>Criteria for success</b>
10. For participant to generate personal narrative on topic of choice (Recounting Event)	<p>Task:</p> <ol style="list-style-type: none"> <li>1. Start with the gist.</li> <li>2. Recall words.</li> <li>3. Combine into sentences.</li> <li>4. Introduce the mind map for Events.</li> </ol> <p>Script: “Let’s look at how you would tell a story about something you have experienced. Before we used these pictures, now can you tell me about (a time when YOU went on holiday).</p> <p>OTHER EXAMPLES:</p> <ul style="list-style-type: none"> <li>-what you did on the weekend</li> <li>-what you did for your birthday</li> <li>-when your child first started school</li> </ul>	<p>Refer to Event mindmap and prompt to assist with macrostructure as needed:</p> <ul style="list-style-type: none"> <li>• Think about the main event of the story and INTRODUCE...e.g. This event is about.... Think of a TITLE.</li> <li>• SET the SCENE – WHERE? WHO? WHEN?</li> <li>○ Make sure adequate reference is made to people unknown to listener (Susan, my sister)</li> <li>• Identify any INITIATING EVENT. Identify any PLAN.</li> <li>• DESCRIBE what happened at each point and, if appropriate, WHY it</li> </ul>	<p>Identifies all components and develops a rich recount.</p>

		<p>happened. As a general rule, use past tense. Build up to a HIGH POINT (if appropriate).</p> <ul style="list-style-type: none"> <li>• Have a definite ENDING.</li> <li>• Explore REACTIONS on or REFLECTION to event.</li> </ul> <p>Prompt with SVO sentence framework from Level 1 to ensure patient using complete sentences.</p>	
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**Introduction to Procedures**

**Identify relevant procedures**

<b>Goal</b>	<b>Task and Instructions</b>	<b>Support</b>	<b>Criteria for success</b>
<p>11. For participant to generate procedural narrative on topic of choice (Procedure )</p>	<p>Task:</p> <ol style="list-style-type: none"> <li>1. Start with the gist.</li> <li>2. Recall words.</li> <li>3. Combine into sentences.</li> <li>4. Introduce the mind map for Procedures.</li> </ol>	<p>Refer to Procedures mind map and prompt to assist with macrostructure as needed:</p> <ul style="list-style-type: none"> <li>• What is the GOAL or the FINAL EVENT that is being planned? What is the</li> </ul>	<p>Identifies all components and develops a rich procedural narrative (procedure)</p>

	<p>Script: “The next type of story we are going to practice is procedures. When you tell someone how to do something, you need to include the aim and make sure the events are in the right order. “</p> <p>“Can you tell me the steps involved in....”</p> <ul style="list-style-type: none"> <li>- playing bridge</li> <li>- planning your holiday</li> <li>- getting ready for the birthday party</li> </ul>	<p>AIM? What needs to be done in order to achieve that?</p> <ul style="list-style-type: none"> <li>• SET THE SCENE with what/who is needed. What ITEMS are needed to complete this task? WHO might be involved? WHERE might it take place? WHEN might it take place?</li> <li>• Describe WHAT HAPPENS at each STEP. Begin with the first step and proceed through to the final step. Be mindful of how much detail to include and to ensure the steps are sequenced in the correct order. If necessary, explain WHY the steps are important.</li> <li>• Have a definite ENDING. What was the outcome?</li> <li>• Explore REACTIONS to the event or procedure.</li> </ul> <p>Prompt with SVO sentence framework from Level 1 to ensure patient using complete sentences.</p>	
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<b>Introduction to Opinions</b>			
<b>Resources for social opinions</b>			
<b>Goal</b>	<b>Task and Instructions</b>	<b>Support</b>	<b>Criteria for success</b>
12. For participant to generate opinion narratives (Opinion)	<p>Task:</p> <ol style="list-style-type: none"> <li>1. Start with the gist.</li> <li>2. Recall words.</li> <li>3. Combine into sentences.</li> <li>4. Introduce the mind map for Opinions.</li> </ol> <p>Script: “Now we will look at the structure needed when giving our opinion on a topic. Lets first use these pictures to get some ideas..... (use social cue cards)</p> <p>Now can you give me your opinion on a different topic? What do you think about XYZ (current news item or other personally relevant topic)”</p>	<p>Generate words to describe picture, support participant in producing complete sentences with SVO frameworks, reinforce the focus on the verb for each sentence. Once the participant is familiar with the opinion framework, reduce visual supports ie remove the pictures and extend the task to self-generated opinion topics.</p> <p>Refer to Opinion mindmap and prompt to assist with macrostructure:</p> <ul style="list-style-type: none"> <li>• INTRODUCE the topic and include a statement in support of or against the topic.</li> <li>• Provide a CONTEXT for the opinion.</li> <li>• Explain your reasons WHY you have that opinion. You need to give EVIDENCE to support your opinion.</li> <li>• Step up - Identify reasons FOR and reasons AGAINST. Consider using</li> </ul>	Identifies all components and develops a rich opinion narrative (Opinion)



		<p>counter-arguments to address both sides of the argument, i.e. the reasons why people hold the opposite view.</p> <p>e.g. “some might say that capital punishment is a fair consequence for the crime but how can you be sure they have had a fair trial?”</p> <ul style="list-style-type: none"> <li>• Explore REACTIONS to issue.</li> </ul> <p>SUMMARISE your opinion at the end and REPEAT your main view.</p>	
<p>13. For participant to engage in <b>free discourse</b> incorporating discourse structures targeted in previous sessions</p>		<p>Once each narrative type has been introduced and the structures’ variations required for each explained, the clinician is able to run the remainder of sessions targeting structures that are appropriate to the participant’s context to encourage natural discourse. For example, if the participant has experienced a major event the previous day, use the session to discuss the event with the Recount framework (or personal narrative) or if there has been a major political announcement recently that the participant feels strongly about, use the Opinions framework to discuss.</p>	

		Gradually reduce visual support and prompting. Continue to refer to the sentence framework and focus on the verb to cue the next sentence (ie what happened next?) and to ensure all sentences are complete.	
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### **A note on Support.**

Type and degree of support can be provided at the clinician's discretion. The focus of the intervention is at word, sentence, and discourse levels. Where word retrieval difficulties are present, and where appropriate, an errorless learning approach is used. It is important here to reduce the load on word retrieval by having both written words available and providing lexical items when difficulties occur. Pictorial support and redirecting to templates and sentence frames are encouraged across tasks in the initial stages of therapy. These can be used to discuss performance but are not obligatory. Relevant worksheets can be provided to all participants to take home for reference where appropriate.

### **A note on Criteria for Success.**

Therapists will work progressively through the levels of the NADIIA protocol as participants are achieving success. The participant will usually need to demonstrate success at the earlier level before moving on to the next level, however, often the macrostructure will support the microstructure. As the program progresses, the sessions are likely to involve all genre. Picture prompts are provided for most sections (related to different genres); these will gradually be faded out, with the focus moving to discussion of salient individualised topics. As the program progresses, the sessions are likely to involve all genre. Therapists may return to earlier levels as required by participant performance.

## 8. Group Sessional Structure

NADIIA can also be carried out in groups.



1. Welcome
2. Warm up discussion
3. Activities (collective / individual)
  - ❖ Collectively work on 2-4 frameworks together with each rating each other
  - ❖ 1 framework each individually (rotate) with each rating each other
  - ❖ Aim for as much production as possible
  - ❖ Move between words – sentences – discourse levels
4. Ratings after each topic
5. Close and discuss homework practice of the activity – practice framework


## 9. List of Resources

Narrative Sequences	<ul style="list-style-type: none"> <li>• 3 -8 event picture sequences</li> <li>• SVO sentence frames</li> <li>• Mind maps for Narratives</li> <li>• A3 Map for Narratives</li> <li>• Rating Scale</li> </ul>
Recalling events / Recounts (personal narrative)	<ul style="list-style-type: none"> <li>• Individually driven topics</li> <li>• Mind maps for Recounts</li> <li>• A3 Map for Recounts</li> <li>• Rating Scale</li> </ul>
Expressing opinions/ideas	<ul style="list-style-type: none"> <li>• Social behaviour pictures (or other)</li> <li>• List of controversial topics</li> <li>• Individually driven topics</li> <li>• Mind maps for Opinions</li> <li>• A3 Map for Opinions</li> <li>• Rating Scale</li> </ul>
Procedures / Planning events	<ul style="list-style-type: none"> <li>• Individually driven topics</li> <li>• Mind maps for Procedures</li> <li>• A3 maps for Procedures</li> <li>• Rating Scale</li> </ul>

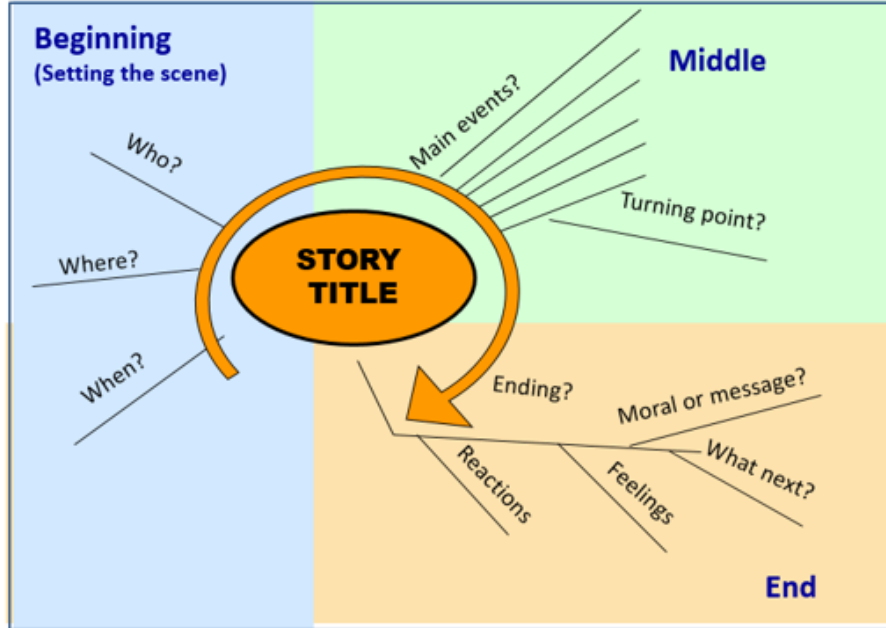
**NB A3 Maps were developed for use in Groups but are also appropriate for individual delivery.**

**Words**

What 	Action 	What ?
<b>Descriptive words</b>		



<b>Linking words</b> 

**Telling stories...**






<b>Sentences</b>
<b>Beginning:</b>
<b>Middle:</b>
<b>End:</b>

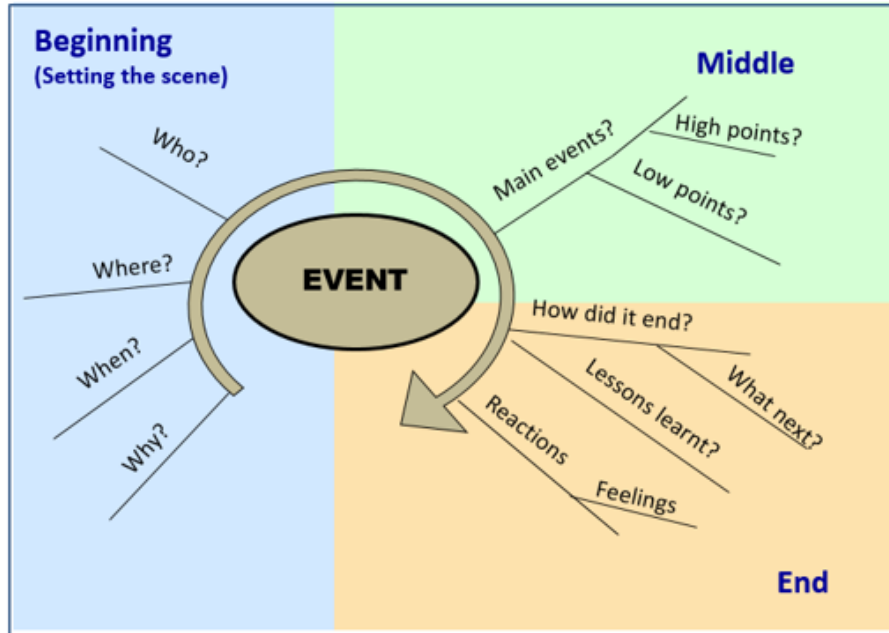
	<b>Main ideas</b>

	
Naming action Finding words Completing sentences Beginning Middle End Linking ideas Clear overall?	

**Words**

What 	Action 	What ?
<b>Descriptive words</b>		
<b>Linking words</b> 		

**Recalling events that have happened...**





**Sentences**

**Beginning:**

**Middle:**




**End:**

 **Main ideas**

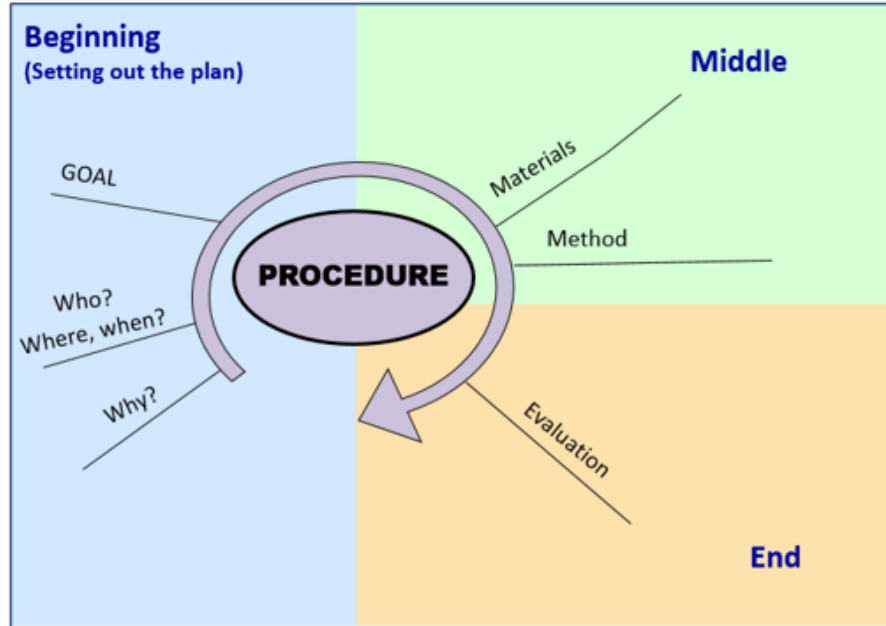
 

- Naming action
- Finding words
- Completing sentences
- Beginning
- Middle
- End
- Linking ideas
- Clear overall?

**Words**



What 	Action 	What ?
<b>Descriptive words</b>		
<b>Linking words</b> 		

**Explaining how to do things...**






<b>Sentences</b>	
<b>Beginning:</b>	
<b>Middle:</b>	
<b>End:</b>	

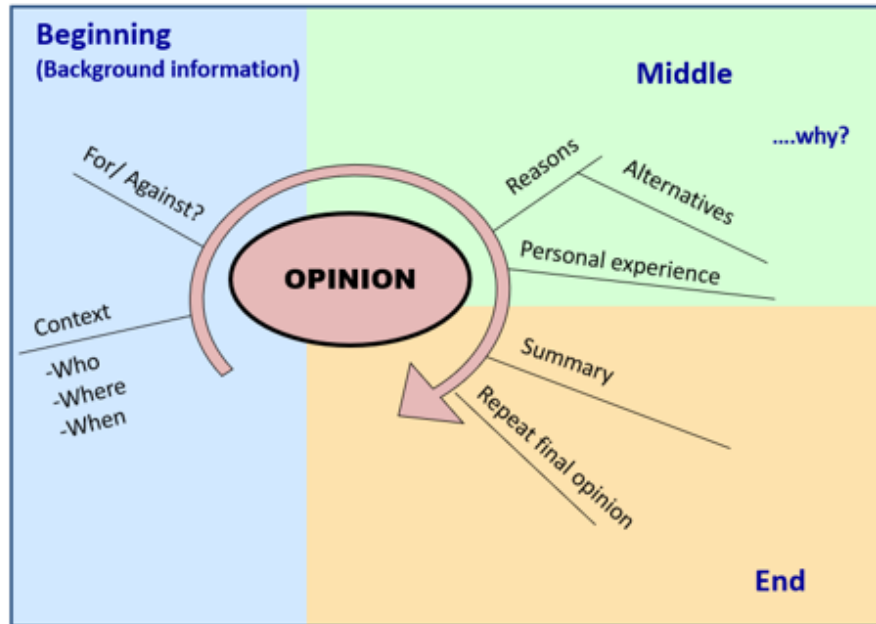
 <b>Main ideas</b>

 
Naming action
Finding words
Completing sentences
Beginning
Middle
End
Linking ideas
Clear overall?

**Words**

What 	Action 	What ?
<b>Descriptive words</b>		
<b>Linking words</b> 		

**Giving an opinion...**







**Main ideas**

**Sentences**

**Beginning:**

**Middle:**

**End:**

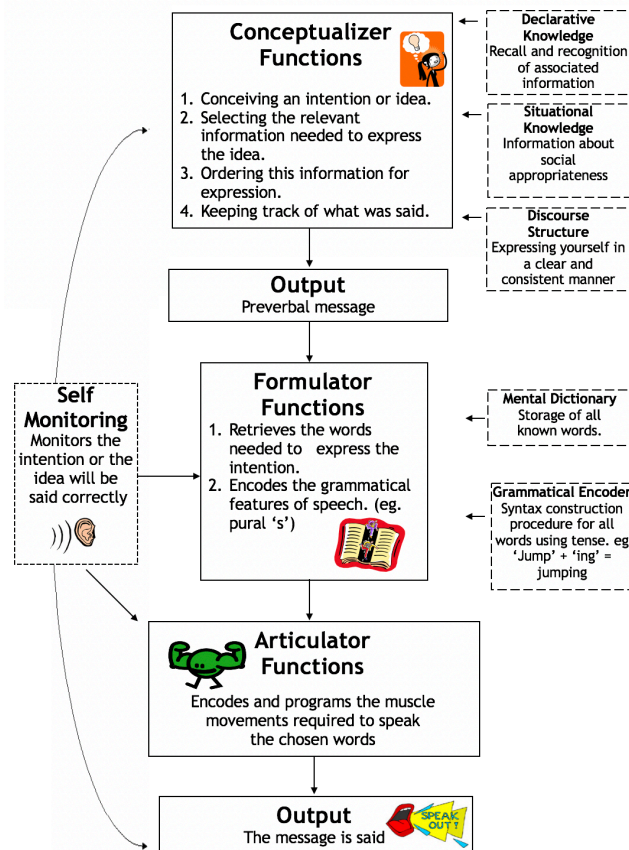



- Naming action
- Finding words
- Completing sentences
- Beginning
- Middle
- End
- Linking ideas
- Clear overall?

## Appendix 1a. Overview of Levelt’s model of language processing

Levelt’s model utilises a top-down approach speech production where processes are divided into four stages: Conceptualisation, formulation, articulation and self-monitoring

- Conceptualisation is a conscious activity that involves:
  1. Conceiving a communicative intention
  2. Selecting the relevant information for realisation of that intention
  3. Ordering information for expression
  4. Keeping track of what has been said earlier
- The process is complex and requires speakers to draw from a number of resources and to proceed through a number of steps of planning.
- Message generation involves two steps:
  - Macro planning:
    - Plan and order various sub goals required to convey one’s intention
    - Output is an ordered sequence of speech acts that are specified for intended mood and content.
    - Lapses in attention during macro planning can lead to different speech errors.
  - Microplanning:
    - Brings the content of each speech act into perspective and assigns the expression of topical, focused or new information.
- Conceptualisation draws upon two kinds of knowledge: procedural and declarative.





## Appendix 1b. Overview of Garrett’s model of sentence processing

Based on Thompson and Faroqi-Shah (2002)

The model describes a series of processes each resulting in a level of representation. There are five main sets of processes:

1. Inferential processes which result in the **message level** representation
2. Logical and syntactical processes which result in the **functional level** representation
3. Syntactic and phonological processes which result in the **positional level** representation
4. Regular phonological processes which result in the **phonetic level** representation
5. Motor coding processes which result in the **articulatory level** representation

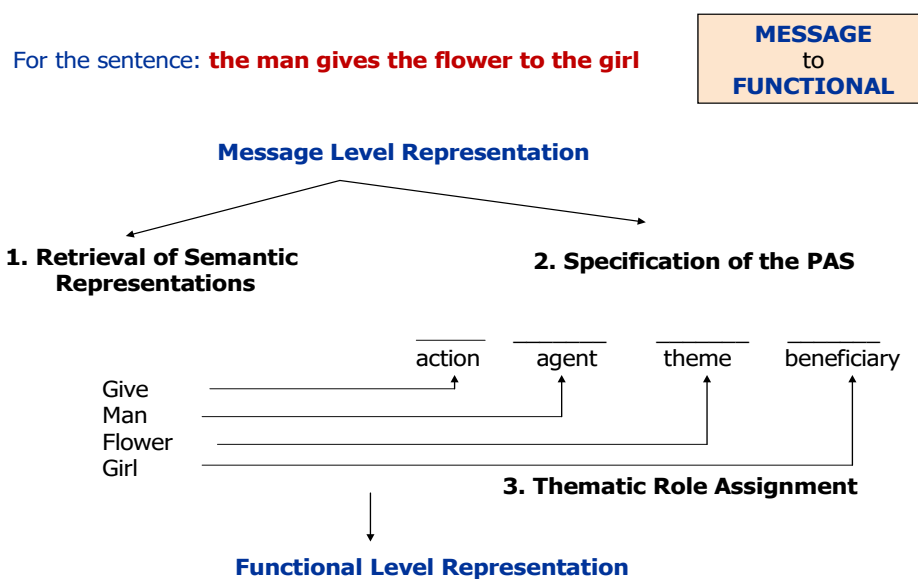
### Message level representation

Non-linguistic, conceptual processes including details of the event (what, who, when, where).

### Functional level representation

Semantic processes that are represented as abstract, linguistic representations built around the verb and its arguments. It is sometimes referred to as the thematic structure of the sentence. Word order is not yet specified. Schwartz (1987) suggested three sub-processes that may be involved:

1. Semantic representations of the main words (nouns and verbs) are selected
2. Verb argument structure (VAS) is specified around the verb. The VAS specifies the number of arguments needed alongside the verb and the thematic role they play (eg. 2 arguments verbs have an agent and an object eg. ‘wear’- the [boy] wears the [jumper]).
3. Semantic representations are assigned to the thematic roles within the VAS. Eg. ‘boy’ is assigned to the role of agent and ‘jumper’ is the object.



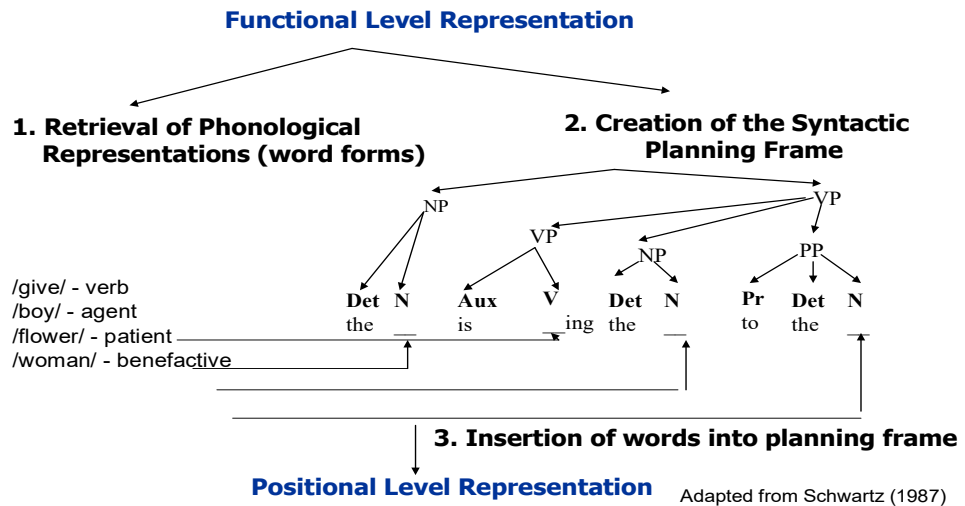
Adapted from Schwartz (1987)

**Positional level representation**

A syntactic frame is produced specifying word order and development of phrasal structure. Function words including determiners, grammatical morphemes. The phonological forms are retrieved from the lexicon and then slotted in to their appropriate slots in the frame.

For the sentence: **the man gives the flower to the girl**

**FUNCTIONAL**  
to  
**POSITIONAL**






**Phonetic level representation**

Regular phonological processes convert the abstract phonological structure to a phonetic level representation.

**Articulatory representation**

Motor coding processes generate motor plans that produce an articulatory representation, allowing the sentence to be produced.

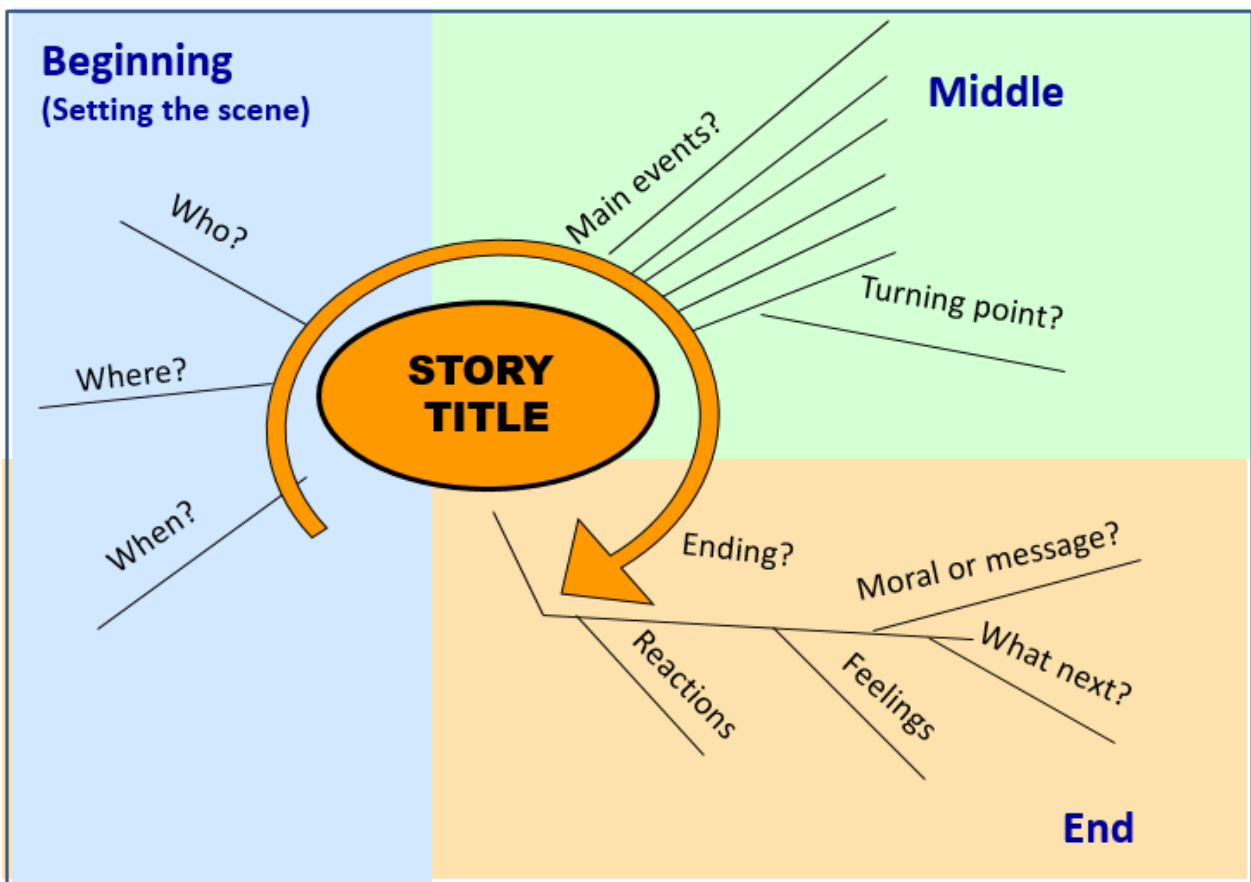
### Appendix 2: Verb Argument Structure (VAS) tables

 <b>ACTOR</b> nouns	 <b>ACTION</b> verbs	 <b>WHAT</b> subject nouns

### Appendix 3. Macrostructure and Mind Maps for each Discourse Type

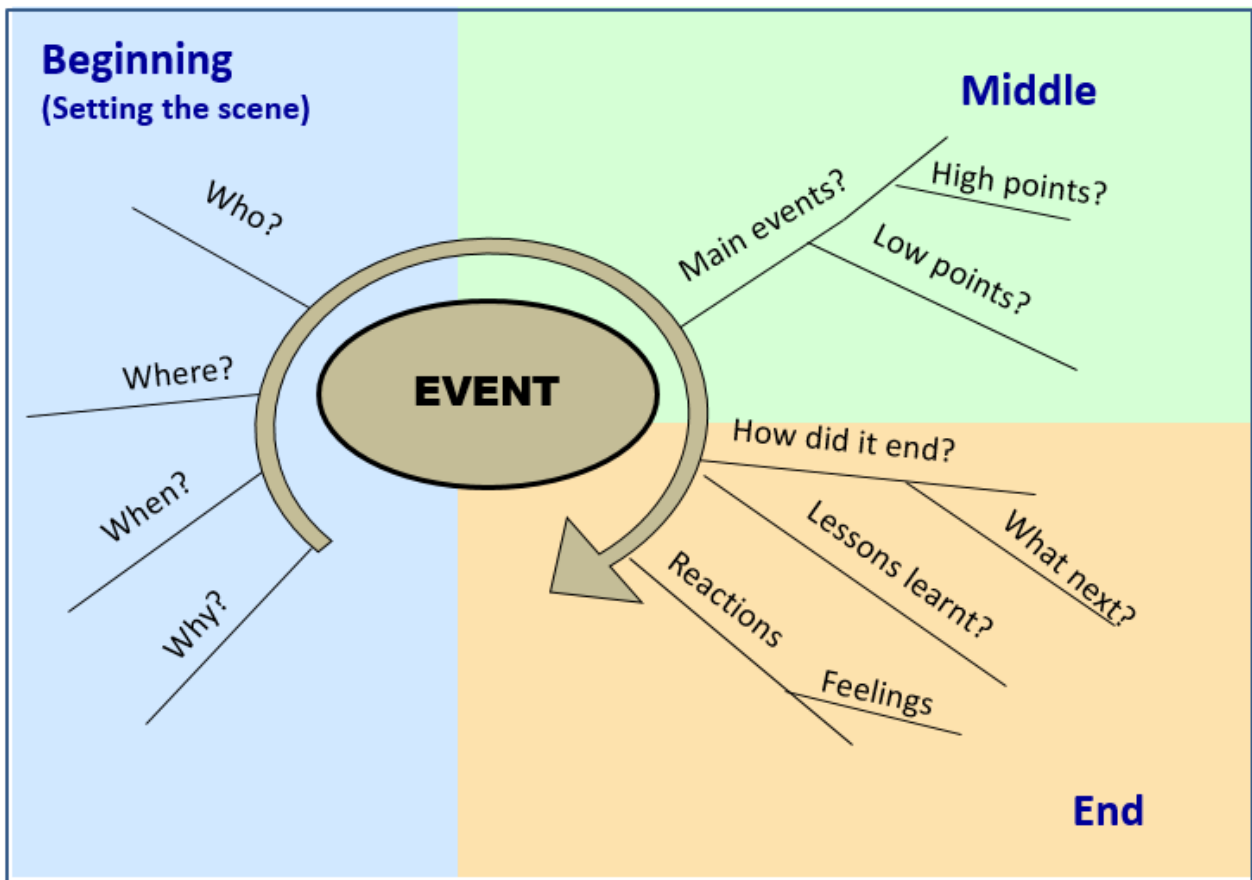
#### Narrative Sequences

- Think about the main gist of the story and INTRODUCE...e.g. This event is about....Think of a TITLE.
- SET the SCENE – WHERE? WHO? WHEN?
- Identify any INITIATING EVENT. Identify any PLAN.
- DESCRIBE what happened at each point and, if appropriate, WHY it happened. As a general rule, use past tense. Build up to a HIGH POINT (if appropriate).
- Have a definite ENDING.
- Explore REACTIONS to story.



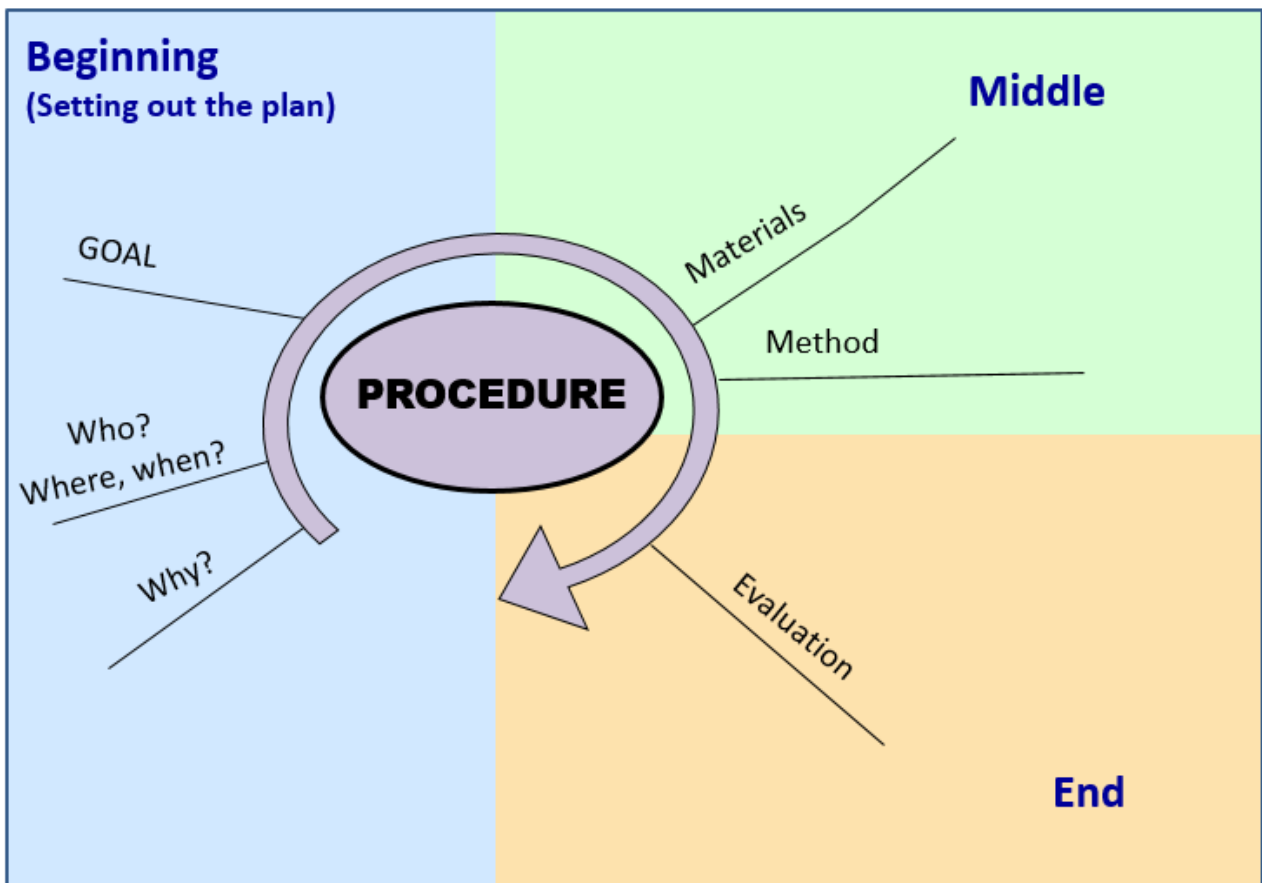
### Recalling Events/ Recounts (can be a personal narrative)

- Think about the main event of the story and INTRODUCE...e.g. This event is about.... Think of a TITLE.
- SET the SCENE – WHERE? WHO? WHEN?
  - Make sure adequate reference is made to people unknown to listener (Susan, my sister)
- Identify any INITIATING EVENT. Identify any PLAN.
- DESCRIBE what happened at each point and, if appropriate, WHY it happened. As a general rule, use past tense. Build up to a HIGH POINT (if appropriate).
- Have a definite ENDING.
- Explore REACTIONS on or REFLECTION to event.



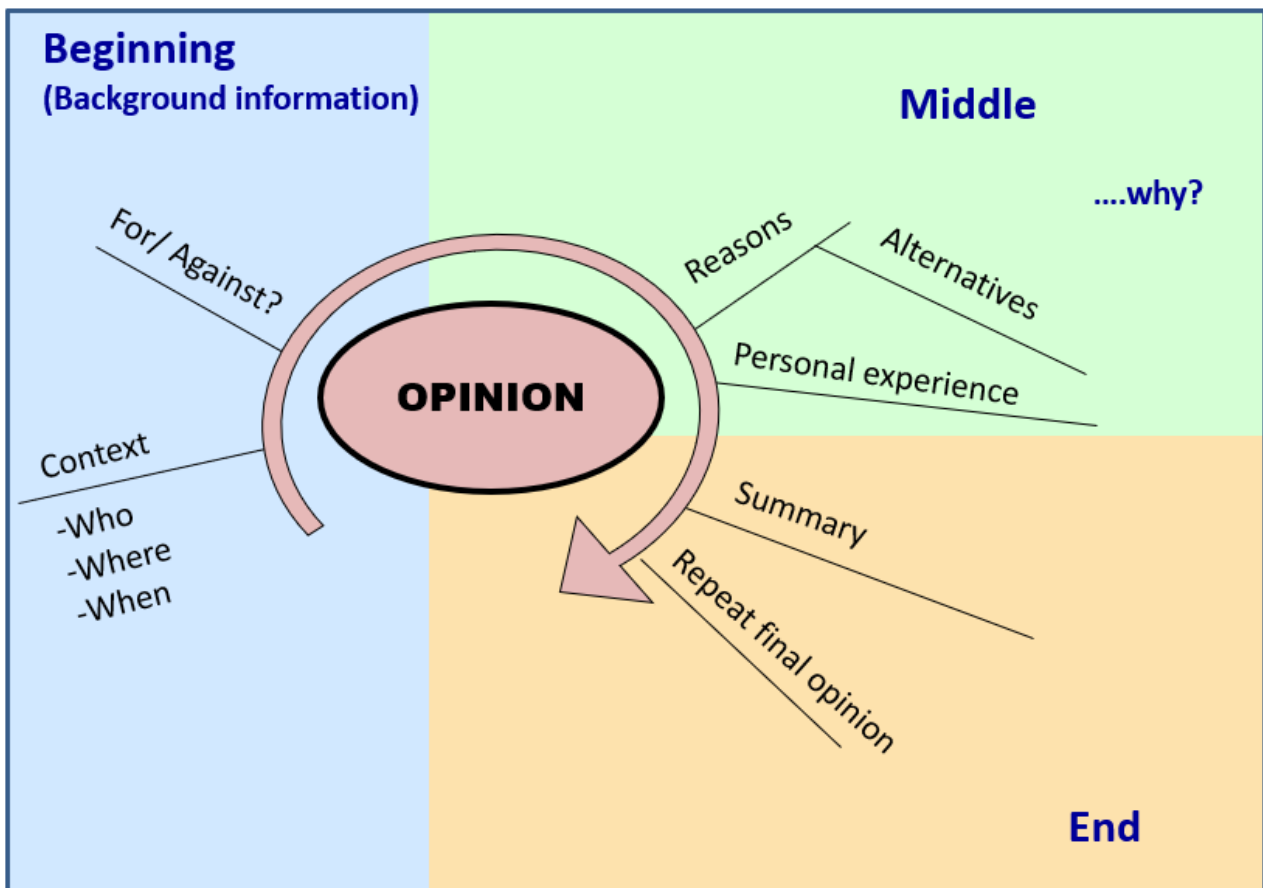
### Planning Events/ Procedure

- What is the GOAL or the FINAL EVENT that is being planned? What is the AIM? What needs to be done in order to achieve that?
- SET THE SCENE with what/who is needed. What ITEMS are needed to complete this task? WHO might be involved? WHERE might it take place? WHEN might it take place?
- Describe WHAT HAPPENS at each STEP. Begin with the first step and proceed through to the final step. Be mindful of how much detail to include and to ensure the steps are sequenced in the correct order. If necessary, explain WHY the steps are important.
- Have a definite ENDING. What was the outcome?
- Explore REACTIONS to the event or procedure.




## Opinions



- INTRODUCE the topic and include a statement in support of or against the topic.
- Provide a CONTEXT for the opinion.
- Explain your reasons WHY you have that opinion. You need to give EVIDENCE to support your opinion.
- Step up - Identify reasons FOR and reasons AGAINST. Consider using counter-arguments to address both sides of the argument, i.e. the reasons why people hold the opposite view.
  - e.g. "some might say that capital punishment is a fair consequence for the crime but how can you be sure they have had a fair trial?"
- Explore REACTIONS to issue.
- SUMMARISE your opinion at the end and REPEAT your main view.






### Appendix 4: Rating scale

How did I go...?



Finding the verb (action) 


 1 2 3 4 5 6 7 8 



Finding the nouns (people and things) 


 1 2 3 4 5 6 7 8 



Completing sentences \_\_\_ + \_\_\_ + \_\_\_


 1 2 3 4 5 6 7 8 



Setting the scene (beginning) 


 1 2 3 4 5 6 7 8 



Getting the main ideas 


 1 2 3 4 5 6 7 8 



Linking ideas 

 1 2 3 4 5 6 7 8 

Ending 


 1 2 3 4 5 6 7 8 

Clear story overall? 

 1 2 3 4 5 6 7 8 



## Appendix 5: Conjunctions

**CONJUNCTIONS**  
(linking  words)

**Coordinating Conjunctions:** And Or But Nor So For Yet  
**Subordinating Conjunctions:** Because Even if As long as While Unless While

**ADVERBS**  
(little words for extra information)

Adverbs are words that describe (modify) verbs, adjectives and other adverbs. They tell us how, when, where, to what extent and why.

How	When	Where	To what extent
Beautifully, quickly, urgently	After, never, then	Everywhere, here, upstairs	Extremely, no (n't), quite