

An introduction to Colourful Semantics

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[with shapes by Susan Ebbels]

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Colourful Semantics

A system to support spoken and written language learning across the curriculum, which can be used for –

- sentence development
- understanding questions
- developing narrative
- understanding written text
- developing vocabulary & learning facts

For Speech Pathologists, Teachers and other education professionals

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It all started with Gordon

- Gordon started at Speech and Language base attached to mainstream school in Autumn 1991 [age 5]
- Started as SLT at base in Jan 1992
- Gordon and Eirian Jones' stroke patient BB (1986)!

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BB – Eirian Jones 1986

- Stroke patient
- Preoccupied with grammar structure [the, ing etc]
- ? Related to previous traditional SLT programme
- Hypothesis → difficulty at 'Functional Level' of the Garrett model
- New therapy developed with semantic focus

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Gordon 1992

- OK at social phrases
- Best sentences in simple picture description
- **Action Picture Test overly focused on using 'the' 'is' 'ing' and struggled to find the other words**
- Previous programme SVO picture description + the /is/ ing

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Verb problems

- ▶ Over reliance on 'have'

'sausages have breakfast'

Silly picture of someone pouring sausages out of a cereal box

'The dog is have....dog.....have dog's biscuits...and then have eat them'

A boy pouring biscuits into the dog's bowl & the dog eats them

'Man have carrot on hand'

Man holding a carrot

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Verb problems

- ▶ Omitted

'Lady upside-down pencil'

Lady writing with pencil wrong way round

'Kettle ...um...tee-shirt'

Lady ironing with a kettle

- ▶ Non words

'kowbaby up the post office'

Woman lifting a child up so he can post a letter in the letter box

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Word finding and word order

WORD ORDER

- ▶ Open window Mummy

WORD FINDING [verbs and nouns]

- ▶ **'Riding** up the ladder' for 'climbing'
- ▶ **'Girl jumper** over the gate'
- ▶ **' Hanger** in the

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Without pictures !

- ▶ ++ word order and word finding problems

'News me like'

- ▶ Single words rather than sentences

'tissue'

Where did you put your book? →

'Um...um...um.. book bag

- ▶ Sometimes unable to even start a sentence → anxious silence at 'News time'

'.....Burger King'

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Bus Story [Renfrew]

Age = 5:08

- ▶ **Information content** = 7
→ below mean for 3 years
- ▶ **Average of 5 longest sentences** = 3.5 words
→ below mean for 3 years

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Gordon and BB

- ▶ Similar profiles
 - ▶ So...try similar therapy !
 - ▶ Focus on sentence semantics not grammar
- **COLOURFUL SEMANTICS**

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Bus Story – pre & post testing

	Pre programme Age 5:08	6 months later Age 6:03
	Score = 7	Score = 22
Information content	Age Equivalent = Below mean for 3 years	Age Equivalent = 4:00 years
Average of 5 longest sentences	Score = 3.5 Age Equivalent = Below mean for 3 years	Score = 6 Age Equivalent = Below mean for 3 years

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Action Picture Test – Information Score pre & post testing

	Pre programme Age 5:10	5 months later Age 6:03
	Score = 20	Score = 31
Information Score	Age Equivalent = 4:06	Age Equivalent = 5:06–5:11 years

Pre	Post
'Kow' baby up the post office	She..um...lifting the baby up...put the letter in...in the post office

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'News' after 4–5 weeks

"I played with my friend at his house"

"I watched TV"

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'News' after 8 weeks

"I have my Easter Egg home" [Written]

"I see Hook...Hook is a baddie...I see pirate ship...my tooth hurts"

"I stayed at home...watched tele all day long"

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'News' after 3 months

"My sister go to my carnival on Sunday...My Nanny coming over on Sunday have dinner in the dining room...Claire holding the bucket...money in it...my Nanny go home on Sunday..at night"

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Conference and Publication

- ▶ Conference:–Making New Connections 1996
- ▶ Language Disorders in Children and Adults: Psycholinguistic Approaches to Therapy 1997


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Conference and Publication

- ▶ Conference: -Making New Connections 1996
- ▶ Language Disorders in Children and Adults: Psycholinguistic Approaches to Therapy 1997
- ▶ **Warning** → Colour Changes ...WHY?

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Colours updated and coding extended

Question Word	Original Coding	Updated Coding
(What) Doing ?	yellow	yellow
Who ?	orange	orange
What ?	green	green
Where ?	red	blue
Who to ?	pink	pink
What like?	blue	

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WHO DOING WHAT Complete coding



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4ICW Colours +/- symbols

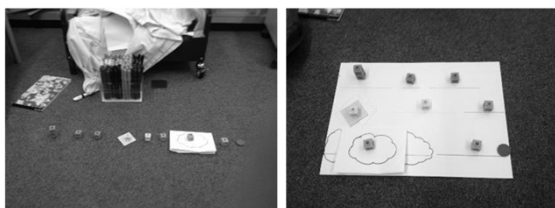


Colours PLUS symbols

Colours MINUS key symbols

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Coding and Literacy : shared writing task

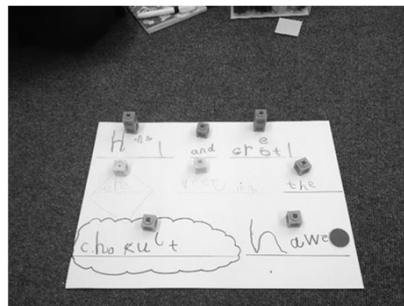


Planning the sentence

Creating the sentence

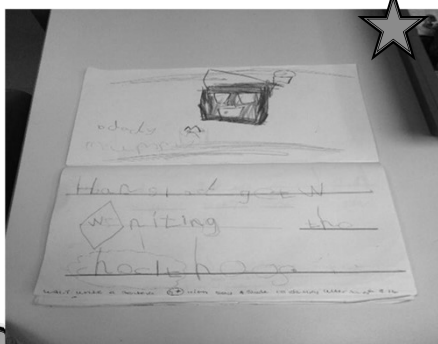
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Coding and Literacy : shared writing task



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Coding and Literacy : final result !



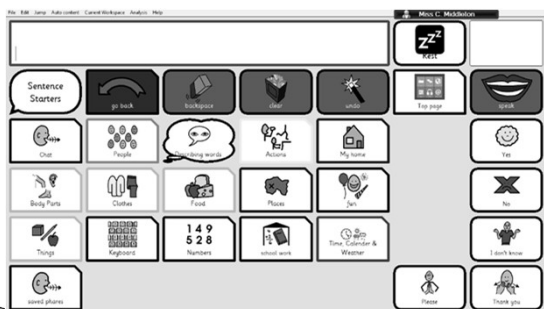
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Why colour coding for AAC ?

- ▶ Much more obvious visual system for AAC users [screen shots of old v new]
- ▶ Immediately gives clues to the sort of meaning the words have and how they can be joined together

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SCREEN SHOT- New coding



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Colourful Semantics –What is it?

- ▶ A highly effective visual way of coding the information in words and sentences.
- ▶ It helps children understand how the meanings of words are linked in sentences.
- ▶ Develops a shared ‘vocabulary’ to talk about language

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What is it?

Question words are used to link to this meaning.

Each question word is designated a colour [or sometimes a shape].

e.g. All words that answer a Who question are orange

The boy is jumping. “Who is jumping?” ->

the boy

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Where does coding come from?

- ▶ Originally used to help children understand how the meaning of words are linked in sentences.
- ▶ This then helped them make correct sentences when talking.
- ▶ This meaning relationship between words dictates how the ideas are arranged in the sentence.

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Where does coding come from?

- ▶ The **key** to this meaning relationship is the **verb/action** word.
 - ▶ The 'grammar' of the sentence can then change [e.g. verb tense, pronouns] →
- BUT the overall core meaning content of the sentence does not change

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Consider these two sentences

*The children **gave** sweets to the teacher*
*The children **have given** the teacher some sweets*

The grammar has changed but the meaning is the same. WHY?

- ▶ *The WHO, WHAT and WHO TO of the sentence has not changed*

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Now consider these two sentences

The children gave sweets to the teacher
The teacher gave sweets to the children

The words and grammar are the same but the meaning is different. WHY?

- ▶ *The people doing the action has changed*
 i.e. the words that mean 'WHO' is doing the action

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We do NOT code everything !

- ▶ Tool not a straightjacket – 80% correct is OK!
- ▶ Be selective
- ▶ You are in control of what is coded
- ▶ Do not have to try and code what child says!
- ▶ Use it to scaffold what you need

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We do NOT fully code everyone !

- ▶ Not all children need full coding support for all their sentences
- ▶ If the system is throughout the school, all children will pick up the basics, then you can choose who you use it with in more detail
- ▶ Can just do additional coding for the area that's relevant for that child / lesson
 eg. Using more cloud words [adjectives]

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What happened in my NHS service?

We had 2 visual systems running

1. Colourful Semantics – Alison Bryan 1997
2. Shape Coding – Susan Ebbels [Moor House School] 2001

BUT both systems from same theoretical base

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Integrating the 2 systems

- ▶ Started to integrate many years ago
- ▶ Initially using the non-argument structure shapes [clouds/diamonds] & verb tense arrows with the colour coding system
- ▶ Now have a fully integrated visual coding system in our service

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Incorporating grammar shapes

- ▶ We have incorporated some shapes into Colourful Semantics to enable grammar to be coded when targeting these specifically

The boy's dog is hiding in the dark forest

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Theory !

- ▶ One theory of how children normally acquire language
[Bootstrapping Theory]
- ▶ Verb Semantics
- ▶ A model of how we move from having an idea to saying a sentence
[Garrett model]

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Theory references

- ▶ Bootstrapping
Chiat (2000)
- ▶ Functional argument structure/verb semantics
Garrett 1980, Black & Chiat (2003)
|
- ▶ Non-argument structure
Pinker (1989), Black & Chiat (2003)

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Bootstrapping – CHIAT [2000]

- ▶ Children use familiar sentence structures to work out the meaning and function of a new VERB
[syntactic bootstrapping]
- ▶ Children watch the event and hear the new VERB → work out how to use it in a sentence
[semantic bootstrapping]
- ▶ Children use intonation/stress patterns to locate verbs/nouns
[phonological bootstrapping]

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'Verb semantics'

- ▶ Verbs are not stored in our memories in isolation
 - ▶ All verbs are linked to 'participants' that need to be there for the sentence to make sense
→ 'who' does 'what' to 'whom'
- [Linguists call these participants '**arguments**']

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'Verb semantics'

- ▶ Some 'participants' [arguments] are essential, others are optional
- ▶ Also other information in the sentence, not linked to the verb, but still add meaning [linguists call these '*non-arguments*']

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Garrett Model - updated 1990

- ▶ Created from normal 'slips of the tongue' i.e. on line processing errors
- ▶ Described 5 levels of representation
 1. Message level
 2. Functional level
 3. Positional level
 4. Phonetic level
 5. Motor level

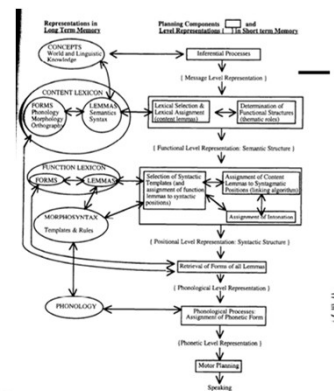
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Kids Slips Jeri J Jaeger 2005

- ▶ Looked at children with normally developing language
- ▶ Noted errors which were 'slips of the tongue' and not part of developing language skills → '*Kids SOT's are similar to adults in most ways*'
- ▶ An interactive version of the Garrett Model is appropriate to use when looking at children's normal expressive language development

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Representation & Processing Components Model [RPC]



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Functional Level of Representation

- ▶ Main Level addressed by Colourful Semantics
- ▶ Planning of
 - verb semantics [functional argument structure]
 - semantic content

via 3 processes →

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Processes [& potential problems]

1. Lexical selection
2. Creation of verb 'argument structure'
3. Assignment of the lexical items

"Who-does-what-to whom"

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E.G. "Ben put the apple in the bowl"

- ▶ **Lexical items**
verb = *put* nouns = *Ben, apple, bowl*
- ▶ **Argument structure/verb semantics for 'put'**
Verb: WHO, WHAT, WHERE
- ▶ **Assignment**
verb: WHO, WHAT, WHERE
[put]: [*Ben*] [*apple*] [*bowl*]

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Errors

Lexical selection error

"I cut dinner my fork"

Verb Semantics error

[Argument Structure error]

"Mum put table"

Assignment error

"Mouse chase cat"

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The problem with verbs ! [Chiat 200]

- ▶ Rarely occur in isolation
- ▶ Less stressed than nouns in word stream
- ▶ Poor auditory processing affects **identification & storage of verb phonology**

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The problem with verbs ! [Chiat 200]

- ▶ Events focusing on verb are brief/transient
- ▶ Poor event perception or joint attention affects **identification & storage of verb semantics**

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Positional level

- ▶ Planning frame created + intonation
- ▶ **Final word order** and **grammatical form** is planned & selected
- ▶ **Phonology** for lexical items and grammatical forms found and inserted

"Ben put the apple in the bowl"
"The apple was put there by Ben"
"He is going to put it in the bowl"

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Positional level → other sentence information

- ▶ 'Other information' [Non argument] in sentences that are not directly related to the verb/verb semantics
- ▶ Still adds to semantic content of the sentence
e.g. adjectives, adverbs of time & manner

"The boy is tall"
"Last week I went on holiday"

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Scope of Colourful Semantics

- ▶ Supports understanding and creating verb semantics structure
- ▶ Supports assigning the right words the right 'slots'
- ▶ Supports normal language learning skills
 - Using familiar structures to learn new verbs
 - Information from events
 - Slows speakers speed and increases stress patterns

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Scope of Colourful Semantics

Colourful Semantics supports normal language acquisition skills

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Scope of Colourful Semantics

- ▶ Also includes some support for 'other sentence information' [non-argument]
- ▶ Can add in other visual support systems for 'morphology' support :- verb tenses, plurals
e.g. Shape Coding lines and arrows

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Colour coding

- ▶ Is it new?
- ▶ Language through reading
- ▶ **Grammatical structure** [surface structure]
- √ **verb semantics**
[deep structure]

Gordon is drawing a picture in his book

v

Gordon is drawing a picture in his book

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QUESTION WORDS ARE THE KEY TO CODING

HOW DO WE CODE?

By linking each participant/other info with

- A spoken & signed **question** word
- A **colour/shape**

For simple sentences →
Associating a target sentence structure with the resulting colour sequence.

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Coding 'other information'

- ▶ NOT related to the semantics of the verb
- ▶ Still use QUESTION WORDS
→ WHEN, HOW, WHY, What LIKE, WHOSE

[Non- Arguments]

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Question words linked to 'other information'

- ▶ **'What look like'** – gives descriptive information [e.g. conceptual language of size & colour]
- ▶ **'What feel like'** – gives descriptive information using conceptual language related to texture, solidity etc
- ▶ **'How feel'** – gives information about emotions

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Question words linked to 'other information'

- ▶ **'When'** – gives information about time
- ▶ **'How'** – gives information about the manner of an action
- ▶ **'Why'** – gives causal information
- ▶ **'Whose'** – gives information on possessives

PLUS
Way to code surface grammar words
e.g. *verbs like 'is' 'were'*

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Additional [non argument coding]

Other information	Question	Colour/shape
Adjective / concept <i>i.e. description related to noun</i>	What like? <i>Cloud words</i>	
Adverb [time]	When?	Brown
Adverb [manner]	How?	Black
Cause & effect	Why?	Purple arrow 
Sentence joining	[Joining up words]	Purple rectangle 
Auxiliary Verbs	[Little doing words]	Yellow + 
Possessives	Whose? <i>Star words</i>	

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2-4 ICW – order of teaching for developing spoken sentences

1. Start with verb + 1 participant
e.g. *WHO DOING* (*DLS = person + action*)
2. Increase variety of verbs/nouns
3. Add different participant

DOING WHAT *DOING WHERE*
action+ object *action+ place*

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1 participant + verb



1 participant + verb

WHO + DOING
I + eat

→ Then increase variety of nouns & verbs

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Different -1 participant + verb

1 participant + verb

DOING + WHAT
Eating + carrot

DOING + WHERE
go + school

→ Then increase variety of nouns & verbs



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2-4 ICW order of teaching for developing spoken sentences

- 4. Increase variety of verbs/nouns
- 5. Introduce verb +2 participants. Same vocab

e.g. *WHO DOING WHAT*
person + action + object

WHO DOING WHERE
person + action + place

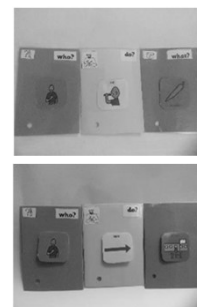
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2 participants + verb

WHO+DOING+WHAT
 I + eat + a carrot

WHO+DOING+WHERE
 I + go + to school

→ Then increase variety of nouns & verbs



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2-4 ICW - order of teaching (cont'd)

- 6. Increase verb and noun variety
- 7. Contrast with 'What like?' [not verb related]

e.g. "He is eating" v "He is tall"

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Contrast with 'WHAT LIKE' [not verb related]

WHO+Diamond+ CLOUD
 e.g. He + is + cold

WHO + DO + CLOUD
 e.g. He + feels + happy



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2-4 ICW - order of teaching (cont'd)

- 8. Introduce verb + 3 participants [e.g. give/show/put]

give/show *WHO DOING WHAT Who TO*
 (DLS = transfer of object to person 4 ICW)

put *WHO DOING WHAT WHERE*
 (DLS = movement of object to stated place 4 ICW)

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3 participants + verb



WHO+DOING+WHAT+WHERE
 I + put + a hat + on my head

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Order of teaching (cont'd)

- ▶ **But** need to be child led &/or curriculum led
- ▶ Please don't teach participants in isolation from verb !
- ▶ Higher level sentence coding will include more non-argument structures

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WHO DOING WHAT WHERE train ☺



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“The Mantra” – not just at the start

- ▶ **Sign** the question word + **Ask** the question?
→ “What is she **doing**?”
- ▶ **Establish the colour/shape link**
“Yes, that's what she's *doing* [+sign].
→ “**Yellow words tell us what she is doing**”
- ▶ Continue to emphasise repeatedly throughout activities.
- ▶ Encourage child to ‘complete the ‘mantra’ [word and sign]
→ “**Yellow words tell us what she is**”

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Variables

- ▶ Represent with **symbols &/or words**
- ▶ Can progress onto coding just using **coloured lines** once familiar with system
- ▶ If you want to focus on two key words in one argument then use 2 symbols/lines but keep colour the same

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The same words may be used in different roles in sentences

E.G

Bob mended the chair

v

Bob the Builder sat in the chair

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Principle ONE

Question words
ARE THE KEY TO CODING

Principle One :-
“Find the verb and ask the questions”

→ Then choose the colour/shape that goes with that question

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Principle TWO

Question words ARE THE KEY TO CODING

Principle two :-

“ALL the words that answer the question are the same colour”

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Why are the questions important?

- ▶ Link to the “**WHO DOES WHAT TO WHOM**” of sentences
- ▶ Link to the related lexical items [key words]
- ▶ See how the parts of the sentence are linked to give the sentence it’s meaning
i.e.
WHO is it? What are they DOING?
WHERE are they? WHAT did they do it to?
Who did they do it TO?

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EXAMPLE – Ashleigh

- ▶ 9 year old – PNI school
- ▶ Non verbal
- ▶ Cerebral palsy
- ▶ Right hemiplegia
- ▶ Single word level comprehension
- ▶ Expression – vocalisations + pointing

AIM

- ▶ Increase comprehension
- ▶ Enable symbol use to express herself

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Plan – WHO, DOING, WHAT & WHERE

- ▶ Resources = symbols, toys, action pics
- ▶ COMPREHENSION → moving toys/selecting pictures to symbol line
- ▶ EXPRESSION → select symbols for line for adult actions with toys or to describe action pictures

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Plan – WHO, DOING, WHAT & WHERE

1. WHO + DOING
2. DOING +WHAT
3. Mixed 2 word level
4. 3 word level WHO + DOING + WHAT
5. Introduced **WHERE** → WHO + DOING + WHERE

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At end of the year

- ▶ Increased confidence
- ▶ Decreased anxiety
- ▶ Increased signing
- ▶ Less need to copy others
- ▶ Increased vocalisations
- ▶ Literacy skills now developing [50 sight words]
- ▶ Improvement in all areas of curriculum
- ▶ Increased attempts to communicate with staff and parents

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Quote

“ Having seen little, if any, improvement in Ashleigh's language over the past few years, we have noted significant progress since starting this programme in October”

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OUTCOME – Oct → July

- ▶ Understands 23 verbs [sign, symbol and spoke word]
- ▶ Produces 3 symbol sentences to describe picture or action
- ▶ Understands a 3 symbol sentence

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What is the Basic coding?

Each colour is linked with a **question word**

- ▶ *WHO*
- ▶ *WHAT*
- ▶ *WHERE*
- ▶ *DOING*
- ▶ *Who TO*

N.B
You don't have to be an expert at analysing sentences to find these essential word meanings!

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Verbs are the core of the sentence

Principle One :- Find the verb, ask the questions

- ▶ 'Questions' can help us get to the 'deep structure' of that verb
[i.e. verb semantics/ argument structure]
- ▶ Your questions should give an answer that makes sense e.g. *The girl ate a biscuit*

WHAT did she eat → a biscuit
WHERE did she eat? → a biscuit????

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Verb Activity

- ▶ So lets look at some verbs
- ▶ Which of these questions **have** to be put with the verb for a sentence to make sense?

WHO	[is doing the action]
WHAT	[is the action done to]
WHERE	[is the action happening]
WHO to	[who is the action done to]

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Verb Activity

'EAT' – what are the essential questions

- ✓ WHO ate ?
- ✓ WHAT did they eat?
- x WHERE did they eat?
- x Who did they eat TO ?

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Verb Activity

'SIT' - what are the essential questions

- ✓ WHO sat?
- x WHAT did they sit?
- ✓ WHERE did they sit?
- x Who did they sit TO ?

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Verb Activity

'GIVE' - what are the essential questions

- ✓ WHO gave?
- ✓ WHAT did they give?
- x WHERE did they give?
- ✓ Who did they give TO ?

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Verb Activity

Get into 2's & 3's and try to decide what are the ESSENTIAL questions for each verb

i.e. What MUST be included to use this verb in a sentence

sat	pour	catch
put	filter	showing
invented	travelled	

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Question word coding

For each question there is a colour or shape.

To decide on which one

- > ASK the question which gives the words you want in the answer ! [Principle One]
- > Code **ALL** those words in the linked colour/shape [Principle Two]

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All the words should be coded

- > For the basic sentence there should be no words in the middle left uncoded
- ...if there are you may need to try again ☺

My Mum sat on the sofa X

My Mum sat on the sofa ✓

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Use the VERB to help you

*Think about the verb and the questions you ask **before** deciding what colour it is....*

WHO -for people and characters

so in '3 Little Pigs' the pigs would be WHO → orange

WHAT -for things/objects, but also for animals not personified [not a Character]

So "Camels live in Egypt" - you'd probably ask WHAT lives in Egypt → green?

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Key to Basic Coding → *Can you remember the principles?*

Principle ONE :-
"Find the verb and ask the questions"

Principle TWO :-
"ALL the words that answer the question are the same colour"

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Basic colour coding – essential question words

Question Word	Colours	Example
(What) Doing ?	yellow	Ben <u>is giving</u> a biscuit to the dog
Who ?	orange	<u>Ben</u> is giving a biscuit to the dog
What ?	green	Ben is giving <u>a biscuit</u> to the dog
Where ?	blue	Ben is putting a biscuit <u>in the bowl</u>
To Who(m) ?	pink	Ben is giving a biscuit <u>to the dog</u>







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Practising the current meaning mantra !!!

- ▶ Orange words tell us **WHO**
- ▶ Yellow words tell us what they are **DOING**
- ▶ Green words tell us **WHAT**
- ▶ Blue words tell us **WHERE**
- ▶ Pink words tell us who **TO**

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Additional coding

Other information	Question	Colour/shape
Adjective / concept <i>i.e. description related to noun</i>	What like? <i>Cloud words</i>	 
Adverb [time]	When?	Brown
Adverb [manner]	How?	Black
Cause & effect	Why?	Purple arrow 
Sentence joining	[Joining up words]	Purple rectangle 
Auxiliary Verbs	[Little doing words]	Yellow + 
Possessives	Whose? <i>Star words</i>	


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Colourful Semantics – non argument structure


We have incorporated a few shapes:-



CLOUD 'what like' words [S.Ebbels]
[adjectives / concepts]



DIAMOND – e.g. *is, was* [S.Ebbels]
[copula & auxiliary verbs]



STAR words [possessives] [Alison's]

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Additional coding – CLOUD words

'What like? clouds' – 3 different sorts of questions

- ▶ What does it look like? [e.g. long, blue]
- ▶ What does it feel like? [e.g. soft, cold]
- ▶ How do you feel? [e.g. sad, worried]

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'What like' clouds

The 'what like' cloud can have a small symbol in the corner to show what sort it is

What looks like *What does it feel like?* *How do you / the character feel?*

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Australian Lang Dev Centre Description words = purple

Modelling 1 x desc word Written sentence

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NEM Lang Dev Centre Description words = purple

Modelling 2 x desc word Written sentence

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Diamond words

- Children often leave out auxiliary verbs like 'is' 'was' 'were' 'has'
- Auxiliary verbs are the 'little' words that are linked to the main verb and help show verb tense

e.g. *The boy is eating*

The cats were sleeping

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Diamond words

Sometime children leave out the 'little verbs' that stand on their own in a sentence too.

e.g. *The boys were in the playground*

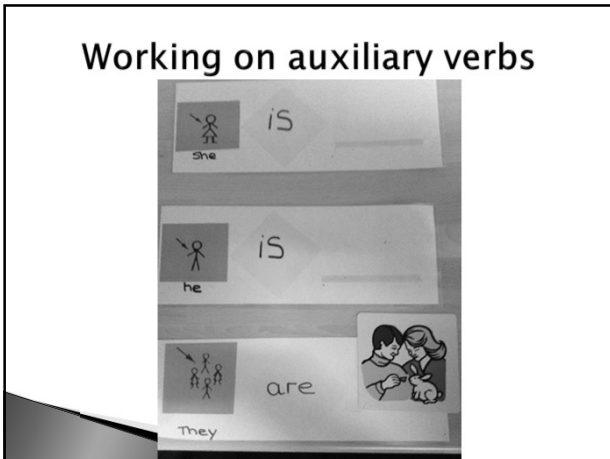
Is your cat black?

ALL verbs are still yellow

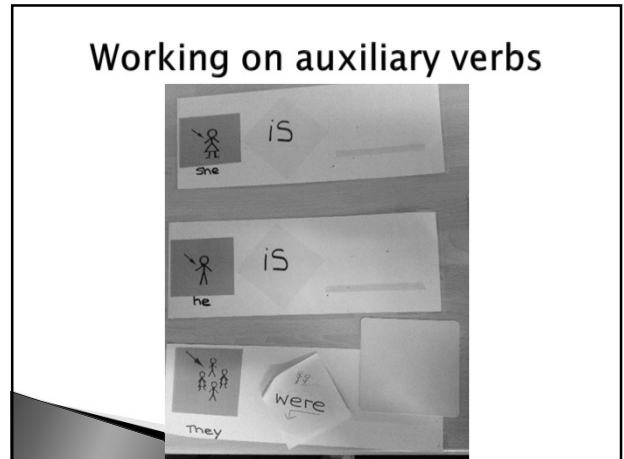
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WHO + diamond + DOING

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COLOUR CODING - Making Questions

Dad was putting his coat on the chair

Was Dad putting his coat on the chair?

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WHOSE

Asking Questions **Whose?**

- ▶ 'Surface level' coding
- ▶ Emphasise /sign final 'z' [or possession]
- ▶ Can go with Who or What or Where

So...

- ▶ Needs to be clear shape which can move about like clouds

-> STAR WORDS My dog ate Dad's shoe

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DOING Star WHAT

Washing her hair

113

Possessives

Eat teddy's apple

She put the book in her drawer

Mrs Bryan's hair is straight

Give the sticker to Kiera's friend

114

Tower Hamlets Children's Therapies WHO DOING WHAT WHERE + pronouns

115

Purple joining up words

- ▶ Co-ordination

- ▶ Subordination

116

Purple Joining Up words

Roll a connective

Velcro sentences

117

Practising the full meaning mantra [current]

- ▶ Orange words tell us **WHO**
- ▶ Yellow words tell us what they are **DOING**
- ▶ Green words tell us **WHAT**
- ▶ Blue words tell us **WHERE**
- ▶ Pink words tell us who **TO**
- ▶ Brown words tell us **WHEN**
- ▶ **Black** words tell us **HOW**
- ▶ **Purple** words tell us **WHY** [& join things up]
- ▶ Cloud words tell us **WHAT** is it **LIKE**
- ▶ **Star** words tell us **WHOSE**

118

PRACTICAL ACTIVITY

- ▶ Look at the sheet of sentences
- ▶ Work in pairs
- ▶ Use the Question Words to work out the colours and if relevant -shapes too

119

CODING and KEY WORD LEVEL

- ▶ Sorted into Key Word level according to the Derbyshire Language Scheme
- ▶ **Can be used as a guide for the order of developing comprehension and expression using coding**

120

The Equipment

- ▶ **Choose a way to represent roles**
- ▶ Nursery/ Key stage 1 =symbols [e.g. Rebus, Makaton].
- ▶ Key stage 2 or literate child =written word

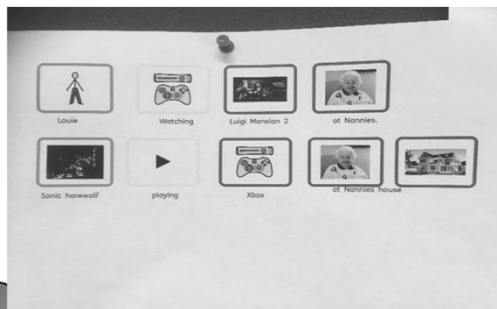
121

How to represent elements

- **colour cards** – select and arrange in right order to **match** colour line
- **white card** – arrange on colour lines
- **coloured lines under words** or shape round words
- Written sentences with **colour 'gaps' to be filled in**
- **Laminated coloured/shape boards** + draw/write/stick on words/symbols
- Symbols programmes – **coloured outline**

122

Communication in print – writing sentences



123

The Children A) Expression

- ▶ word order problems e.g. ' news me like '
 - ▶ omissions of verbs or essential key semantic information from the sentence. Marked WFD
 - ▶ lack of sentence variety
 - ▶ tendency to 'word string'
 - ▶ tendency to start a sentence, then trails off when he gets stuck and tries another one
 - ▶ Problems reflected in written language
- ALSO children where motor planning problems limiting sentence structure

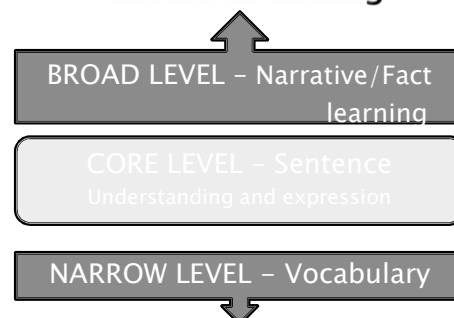
124

B) Comprehension

- ▶ Applicable to severe comprehension difficulties
- ▶ Just need to be able to 'colour match'
- ▶ Focus on signs and colours/shapes as major support
- ▶ Therapy for difficulties with e.g.
 - 'question word' comprehension
 - Key Word based comprehension work
 - Written text comprehension

125

Levels of coding



126

CORE LEVEL SUPPORT

- Developing sentence structure
- Expressing reasons – science
- Development of ‘interesting’ sentences in creative writing [cloud words]
- Supports question comprehension
- Developmental order of understanding question words [WALL CHART]

127

Developing spoken sentences

Coding can be used to develop a child’s ability to produce spoken sentences

- To increase the range of sentence types
- To increase the complexity of sentence structures

128

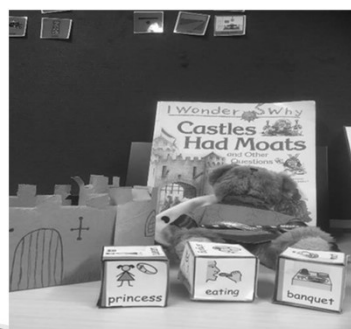
Targeting specific sentence types

- We may choose a specific sentence type to work on
- We can describe this in terms of the Question words

“We are working on WHO + DOING + WHAT”

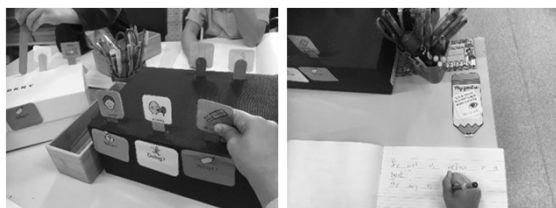
129

Roll a sentence CASTLES



130

Independent sentence writing WHO DOING WHAT



Make a lollipop stick sentence

Write your sentence coding strip support

131

WHO DOING bags



132

Supporting Key word Level/ICW's

Can use colour coding to support

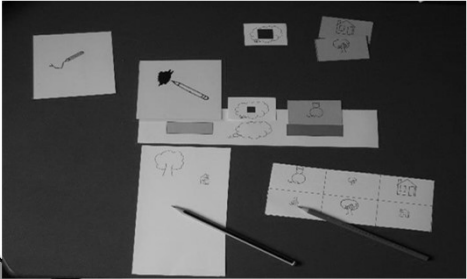
- ▶ Comprehension
- ▶ Description
- ▶ Command

in all Key word level /ICW type activities
e.g. Derbyshire Language Scheme [DLS]

133

3 ICW comprehension – coloured symbols + coloured line

colour /draw big/little cat/house/tree



134

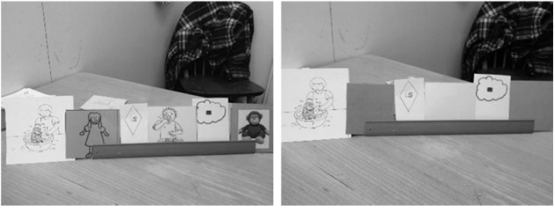
Reducing the coding support

Once the child is secure with the full coding → reduce the support you are using

1. Use the colour cards or line but move from coloured symbols to white symbols
2. Reduce the number of symbols, just leave the tricky ones there
3. Use colour cards /lines but no symbols
4. Gradually take some of the colours away, but encourage the child to touch where they were

135

4ICW Colours +/- symbols



Colours PLUS symbols Colours MINUS key symbols

136

Principle THREE


“Gradually reduce the amount of coding support!”

137

Reducing coding support

Lowest levels of support

- ▶ Coloured pens
- ▶ Colour cards
- ▶ Tapping the table !



138

Practising target sentences

Colour line only

- ▶ Sometime we just have a colour line for the sentence as a prompt
- ▶ the child uses the colours to help them say the sentence

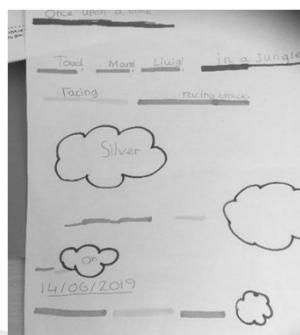
139

Coded lines for 'because'



140

Idea planning in literacy year 3



141

Using target sentence types

During the school day you can get staff to support the child's *target* sentence(s) in other activities too

- ▶ *Sometimes you just need the colour line/card as a prompt*
- ▶ *Other times you may need to do a little preparation*

142

In regular activities

Sometimes a regular activity provides practice for a target sentence

- ▶ Have a piece of card with the line of colours/ coloured symbols on it – stick beside that activity or on the child's table
- ▶ Ask the child a question e.g. '*What did you do?*' '*What must you do now?*' + point to the colour lines/symbols to help them say the sentence

143

Target = 'put' + object + place

(*put* *what* *where*)



- ▶ Stuck up over their peg – coloured line to elicit "*put coat on peg*"
- ▶ Stuck on child's table – coloured line to elicit "*put work in tray*"

144

'Put coat on peg'



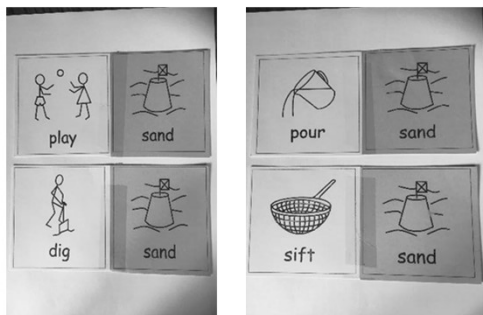
145

'Put work in tray' + / - symbols



146

By the Sand Pit DOING WHAT



147

In Topic Work

- ▶ Often a target sentence can be supported in topic work activitieswith a little preparation
- ▶ Use the colour line + symbols/line drawings to support the required sentence

148

**Reception - Spin a Sentence
WHO DOING WHERE**



Spin a sentence board

Spin a Sentence area

149

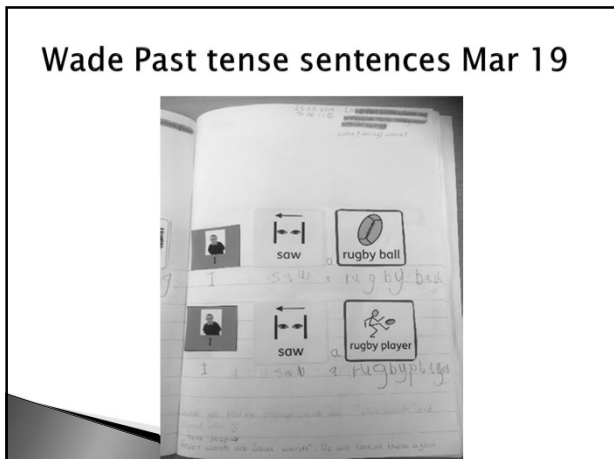
In Music



2 key word level: action + object

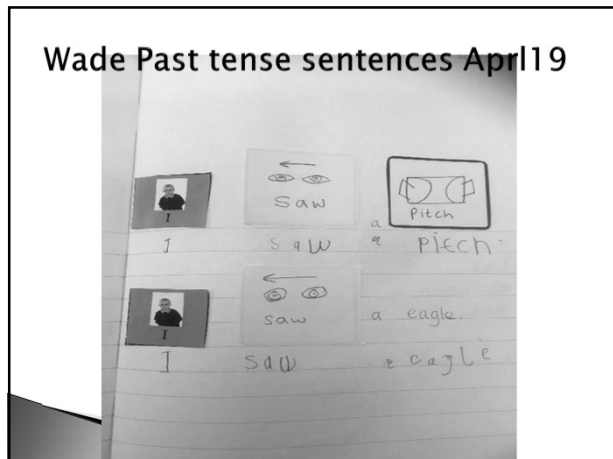
150

Wade Past tense sentences Mar 19



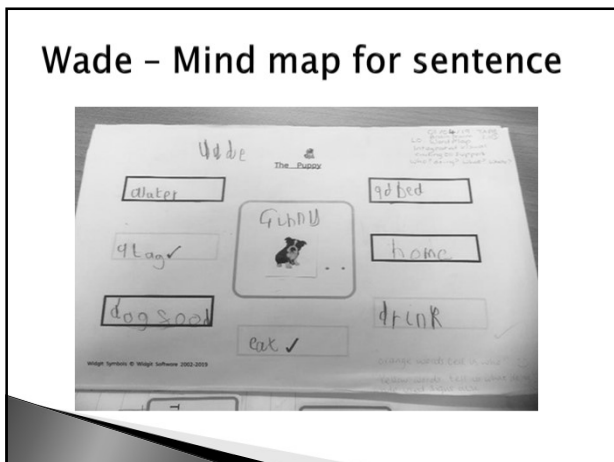
151

Wade Past tense sentences April 19



152

Wade - Mind map for sentence



153

Topic Worksheets

- ▶ Often it is hard for the children to record their work
- ▶ They may need a very simple, **repeated** structure
- ▶ YOU choose the sentence structure.... DON'T try to code what the child gives you
- ▶ Coded work sheets can be made for cloze tasks or copying tasks

154

Topic Worksheets

When recording an experiment you can have a worksheet with

- ▶ a coded line for the target sentence
- ▶ key vocabulary to copy from OR
- ▶ key vocabulary to cut out and stick on

155

'Seeds' - cut and stick

	water		in the pot
	seed		in the pot
1.	put	soil	in the pot
2.	put		
3.	put		

156

Key Texts [Big Book]

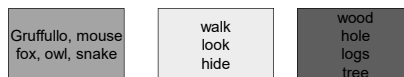
- ▶ Can use Key Texts to find vocabulary relating to *current sentence structures being targeted* by therapist or to create simple narratives
- ▶ Photocopy characters, locations from the book if the child cannot read key words.
- ▶ Use these to create a 'sentence' which can be 'read' out or written

157

E.g. 'The Gruffulo'

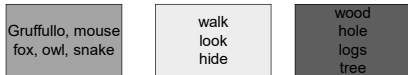
Targeting sentences using *who' + 'what doing' + 'where'*

Write words or lay the pictures onto coloured cards



158

Recording the sentence(s)



- a) Child then chooses the words to write on a colour line
 - or
 - b) Child chooses the pictures to stick on colour line
- The Gruffullo is walking in the wood

159

Mainstream Reception

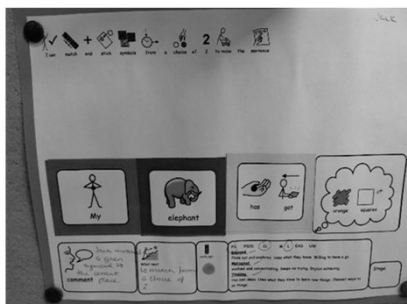


Whole class

Small group with support

160

MLD KS1 - basic descriptive writing task



161

Mainstream Year 1 writing task



162

TA uses cards to support



163

Extension activity - harder cloud words



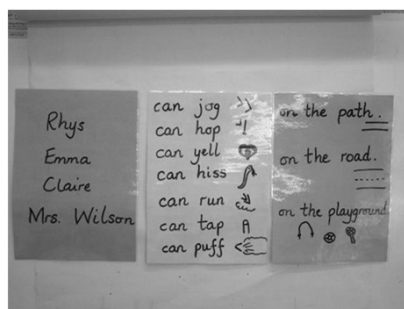
164

Using the same simple sentence for descriptive writing

- ▶ Brainstorm vocabulary for each colour
- ▶ Children practices creating several sentences out loud with same structure, changing the vocabulary
- ▶ Rub out the words the children can spell themselves
- ▶ Children write sentences and draw pictures

165

'Things we can do' - brainstorm



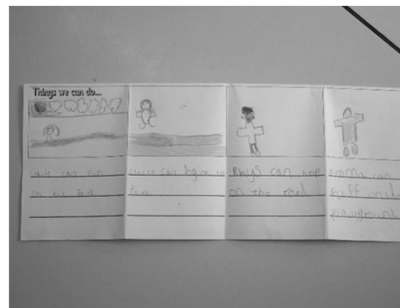
166

Rubbed out words they can spell for themselves





167


'Things we can do' booklet



168

The  ghost heard a noise in the forest.

The ghost heard a  noise in the forest


The ghost heard a noise in the  forest



175

Multiple adjectives

▶ You can show that you need more than one in a sentence by using a number of clouds

'Use these words to tell me more about the character in the story'



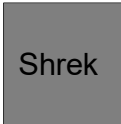
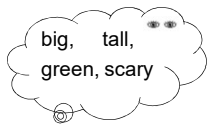
He saw a   bear.

176

Year 1 task

Using describing words for
'What does Shrek look like?'



Who is it? What does he look like?


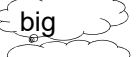




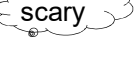
177

Year 1 task

Using describing words for
'What does Shrek look like?'

Shrek  is 












Shrek  is 

Shrek  is 

178

Three Little Pigs

[from - Integrated therapy services]

- ▶ Pig 1 built a house of 
- ▶ Pig 2 built a house of 
- ▶ Pig 3 built a house of 
- ▶ The  wolf blew the house of  down
- ▶ The  wolf blew the house of  down
- ▶ The  wolf climbed the house of bricks
- ▶ The  wolf fell down the chimney
- ▶ The  wolf fell in the pot of  water

179

SCIENCE – using purple joining words to express events v reasons

FLOATING & SINKING

We put a brick in the water

and

We put a feather in the water.

180

Framework for answers

Why did the brick sink?
 ───────────────────────────────────▶
 Because it was heavy

Why did the feather float?
 ───────────────────────────────────▶
 Because

181

Coming out February 2020

Colourful Semantics:-
A Resource for Developing Children's Spoken and Written Language Skills

182

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184

CHART LINKING WITH GRAMMAR

Question Word	Coding	GRAMMAR
What LIKE?	Cloud Words	ADJECTIVES
PLUS		
'little yellow words' e.g. is, were, can [linking verbs - be , get]	Diamond Words	AUXILIARY VERBS [& 'linking verbs']
Sentence joining e.g. 'and, then, so' 'because, although, until	Joining up words	CONNECTIVES/ CONJUNCTIONS

185

Supporting Sentence Understanding

Don't forget coding can support understanding too

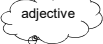
1. Following instructions for certain sentence types
2. Understanding different parts of sentences e.g. prepositions [in/under] 'little blue words'
3. Understanding question words

186

1. Following instructions

You can focus on one type of sentence to use in instructions you give the child

e.g.

action +  + object

- ▶ Think of times school could use these
- ▶ Have a card available with the colour line on to support the child's understanding.

187

Following instructions



1] P.E. -

"Kick the big ball"

"Roll the red hoop"

2] Tidying Up -

"Wash the green paint pots"

"Collect the new pencils"

3] Creative activities

"Draw a big monster"

"Paint blue hair on him"

188

2. Understanding parts of sentences

- ▶ You can focus on developing the understanding of just one part of a sentence
- ▶ Use a coloured line and just have symbol/written support for that part

e.g. **prepositions** , **time words**

189

Understanding prepositions



Selecting the correct preposition symbol to go with the picture

190

Understanding time words

- ▶ Time words are often hard to understand e.g. 'today, yesterday, last week, next week'
- ▶ Time words answer the question 'when'
- ▶ 'When' words are **brown**
- ▶ Explain that **brown** words change the **yellow** doing word
- ▶ You **MUST** have a familiar context and consistent language to teach 'time' words

191

3. Understanding Question words

You can support *question comprehension* in class with colour coded cards + signs

- by teachers white board
- small laminated cards for use at tables

192

Teaching Question words

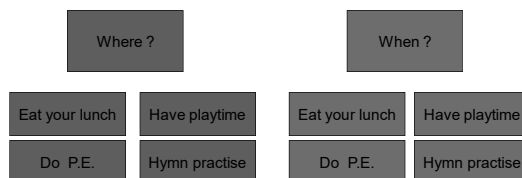
You can teach understanding of *question words*

- ▶ thinking of simple questions that contrast 2 of the questions
- ▶ getting the child to decide what colour question it is BEFORE answering it

193

Using coding to teach understanding of question words

Understanding 'where' v 'when'



194

MLD KS1 - Coded symbols for all reading books !



195

Understanding Written language

- By using the key questions + coding you can focus on understanding texts.
- Photocopying the text enables you/child to write on it!
- You can code work sheet questions to go with current class topic or texts.

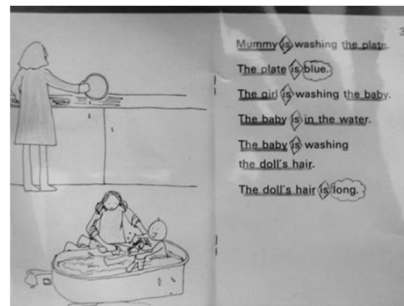
196

Supporting reading comprehension

- Adult asks the question and indicates what colour question it is e.g. 'What did Floppy do?' + point to 'yellow' card .
- If questions are written down - underline the '..do? in yellow
- Child looks for words in the text that answer that question & child underlines those words in the right colour
- Child then answers questions verbally &/or writes answer down

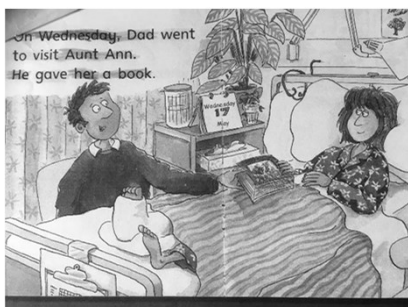
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Coded Text Comprehension - LTR



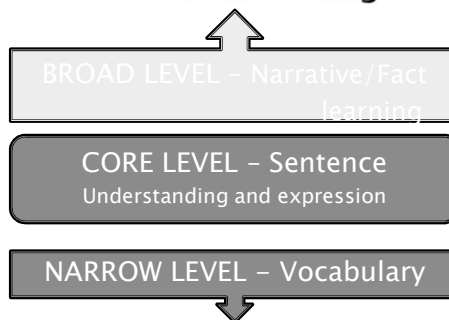
198

Aunt Anne Goes To Hospital



199

Levels of coding



200

Narrative Coding

- ▶ Question words form a structured framework to create a narrative
- ▶ Coding supports the understanding of question prompts
- ▶ Coding supports finding the elements the narrative e.g. who, when, where
- ▶ Drop coded structure when child is ready

201

Types of Narrative Support

- ▶ News
- ▶ Familiar texts/stories as a basis for narrative e.g. big book, fairy stories,
- ▶ Original narrative
- ▶ Non fiction narrative

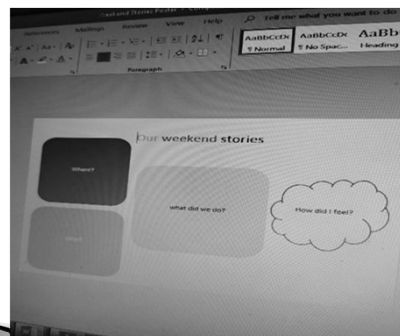
202

Structuring a narrative

- ▶ Some children with very limited language benefit from a set visual structure they always use for narrative work
- ▶ In my KS1 Base we use the Black Sheep story planner.
- ▶ Coding can be used to support ANY narrative framework

203

Weekend Narrative



204

Tower Hamlets Children's Therapies Weekend Narrative

Weekend news Name: _____

When?	On...	
Where?	I went...	
Who?	with my...	
Did what?	L...	
Why?	because...	
Feeling?	I felt...	

205

Story Structure Sticks

206

Simple Narrative Structure

		(One day there was a boy)
		and
		(The boy was in the park)
		and
		(The boy was playing)

207

Harder narrative - familiar text

			<i>One day Cinderella was at home</i>
			<i>Cinderella was crying in the kitchen</i>
then			
			<i>Then the Fairy Godmother appeared</i>
then			
			<i>Then Cinderella went to the ball</i>
			<i>ETC</i>

208

Resource : Black Sheep narrative packs

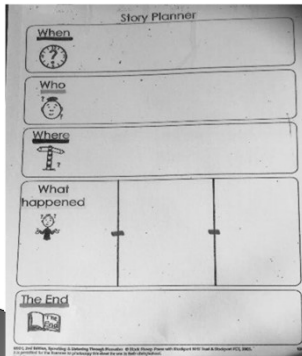
- ▶ Nursery Narrative Pack
 - *story components:- who, when, what next*
- ▶ Reception Narrative Pack
 - *story components:- who, where, when, what happened next*
- ▶ Fun with Narrative [big books]

209

Reception Narrative - colour coded cue cards

210

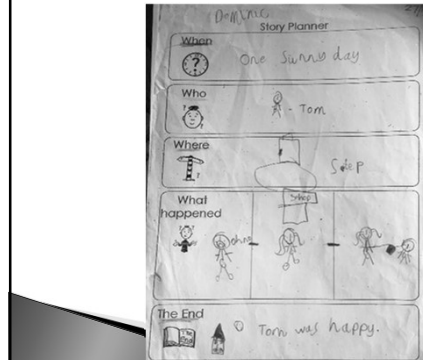
Black Sheep Press Story Planner



- ▶ WHAT HAPPENED divided into 3 sections
- ▶ Purple joining up words

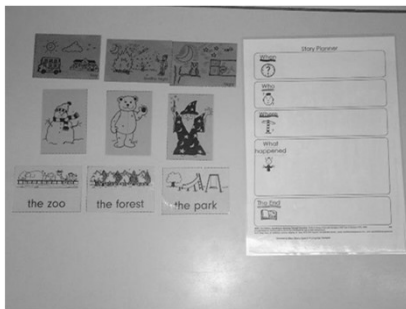
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BSP Story Planner - Quick Draw



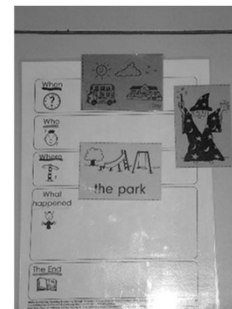
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Story options - Creating the Story Starter



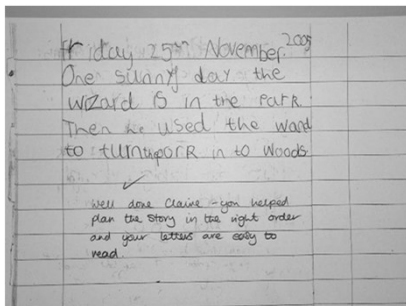
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Selecting cue cards



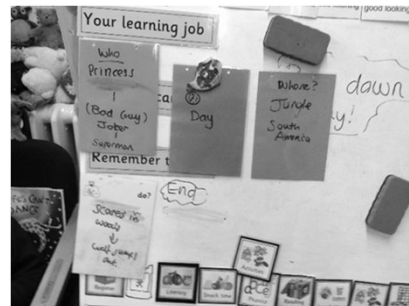
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Written story



215

Giraffes Can't Dance - Creating own narrative



216

Narrative Vocab Flip Books

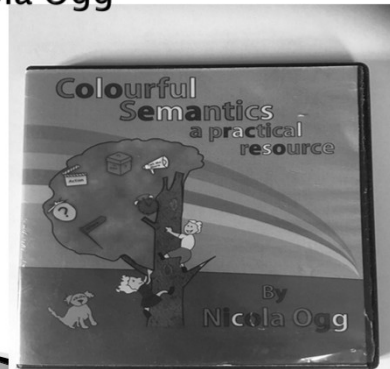


Wall Display

WHO

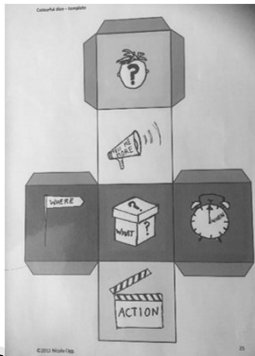
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Nicola Ogg -



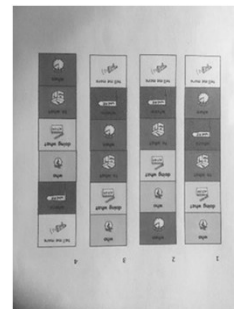
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Nicola Ogg - Story Dice



219

Nicola Ogg- Bookmark Prompts



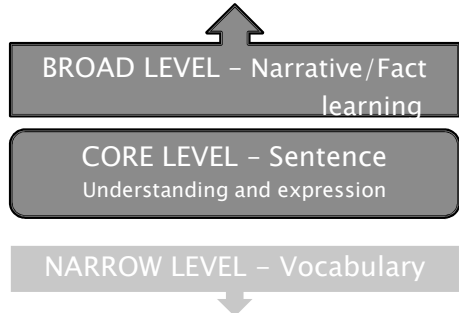
220

Table Top reminders



221

Levels of coding



222

Vocabulary Coding

- ▶ Coding can be used to teach and practice key topic vocabulary through colour coding the vocabulary in
 - vocabulary books
 - Wall displays
 - Generating semantic webs/ mind maps

223

Coding Vocabulary

So HOW do you decide which colour/shape to code your vocabulary with?

- ▶ Use the QUESTION WORDS
- ▶ Ask the questions in relation to the vocab and see which one it answers best

Sometimes 2 questions may fit. Use the one that is closest to the meaning you want.

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Colour Coding – seaside vocab



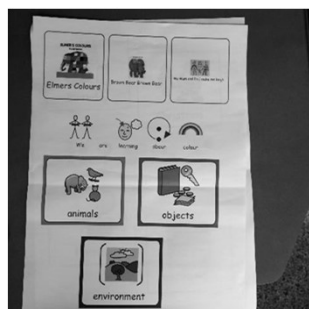
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Leona – 'seaside' Topic Mind Map



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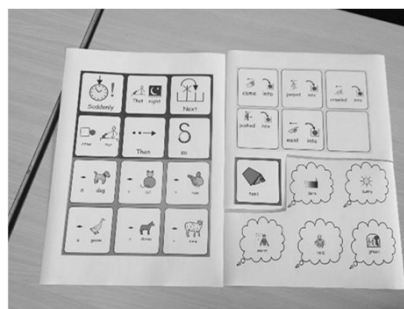
Big Books & Topic fact learning



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Vocab from class text → own sentence creation

MLD school



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Topic Vocab summary sheet

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Learning Facts – KS2 history topic

Amy (Y6 mainstream) used **coded fact sheets** as basis for written work as well as learning the facts.

e.g. CHURCHILL [colour coded]

- > What kind of word [i.e. orange 'who']
- > When did he live ?
- > What did he do ?
- > What was his job?
- > Where was his office?
- > What was he like? etc

1874 - 1965

Led country. Smoked cigars

Prime Minister

10 Downing Street

Short, balding, clever, good communicator

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Similar vocabulary

Coding can be used to clarify the meaning of similar words

prison where?

prisoner who?

A burglar Who did it?

Burgled What did he do?

A burglary What is the crime?

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Supporting phonics – alphabet book

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Supporting phonics – sentence

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Mainstream KS1 YEAR 1

Mainstream and DLD Base

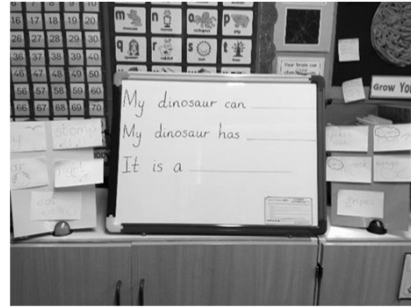
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Sentence Builder



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Riddle framework



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Mainstream KS1 YEAR 2

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Year 2 - Mainstream Wall Display



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English Writing Wall Brainstorming Adjectives and Adverbs

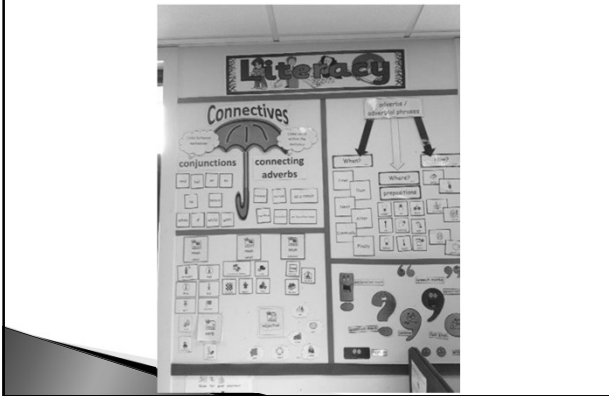


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Mainstream KS2

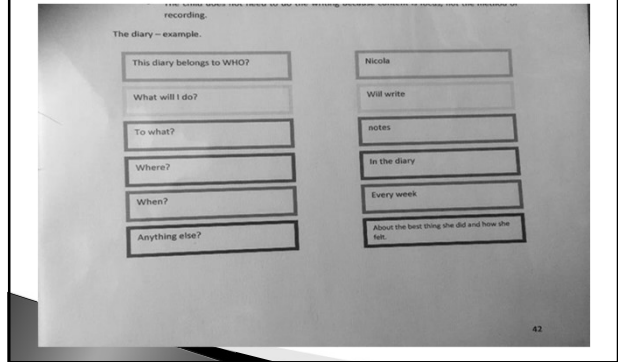
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KS2 - 'GRAMMAR' - Wall Display



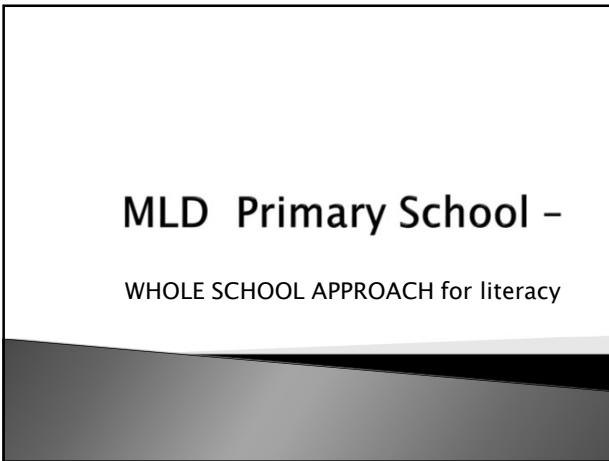
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N. Ogg - Diary



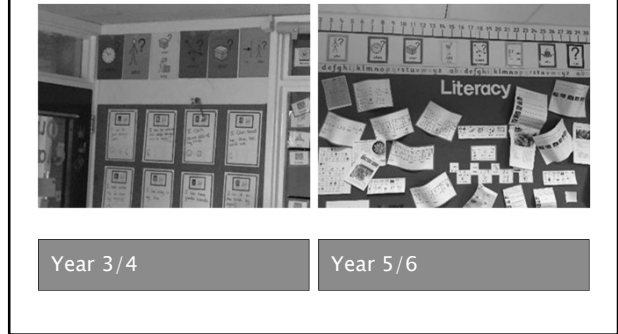
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MLD Primary School - WHOLE SCHOOL APPROACH for literacy



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MLD - Coding up in every class



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Symbol Wall - *Scottish colours*



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MLD School - class resource



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Vocab books – early years



WHEN + WHO

DOING + WHERE

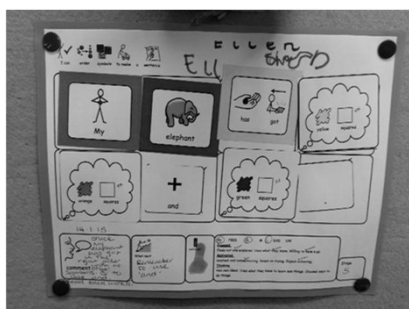
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Sentence strips – selected vocab



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Elmer sentence 'writing'



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Feelings – WHO + DOING + CLOUD

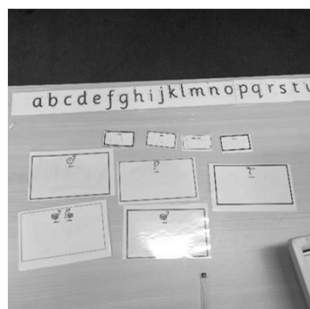


Sentence Strip

Feelings 'clouds'

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Sentence writing – individual cards for each coded element



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