

An introduction to Colourful Semantics

DEvised BY
ALISON BRYAN
[with shapes by Susan Ebbels]

1

Contact details

Email: alison.colourfulsemantics@gmail.com

Twitter: @alisoncolourfu1

Websites:
www.integratedtreatmentservices.co.uk

www.londonspeechtherapy.co.uk

2

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

3

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)!

4

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

5

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

6

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

7

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

8

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

9

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'

10

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

11

Gordon and BB

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

→ **COLOURFUL SEMANTICS**

12

Bus Story – pre & post testing

	Pre programme Age 5:08	6 months later Age 6:03
Information content	Score = 7 Age Equivalent = Below mean for 3 years	Score = 22 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

13

Action Picture Test – Information Score pre & post testing

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

14

'News' after 4–5 weeks

"I played with my friend at his house"

"I watched TV"

15

'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"

16

'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"


17

Conference and Publication

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

18

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	

19

WHO DOING WHAT Complete coding



20

4ICW Colours +/- symbols

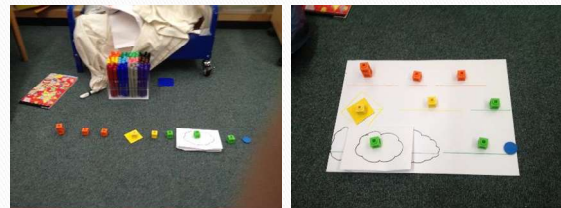


Colours PLUS symbols

Colours MINUS key symbols

21

Coding and Literacy : shared writing task

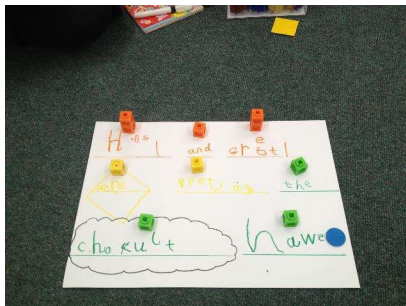


Planning the sentence

Creating the sentence

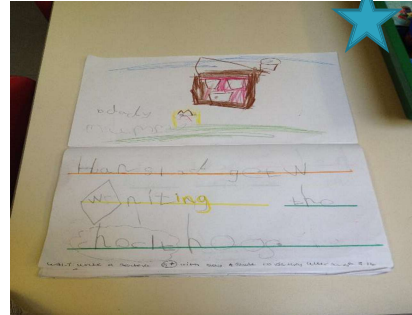
22

Coding and Literacy : shared writing task



23

Coding and Literacy : final result !



24

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.

31

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

32

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*

33

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

34

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

35

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]

36

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

37

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

38

Incorporating grammar shapes

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

The  boy  dog  is  hiding in the  dark  forest

39

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]

40

Theory references

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

41

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]

42

'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*']

43

'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*']

44

Garrett Model - updated 1990

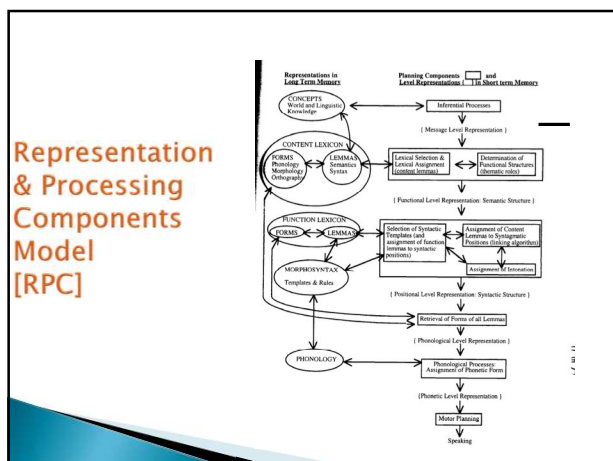
- ▶ Created from normal 'slips of the tongue' i.e. on line processing errors
 - ▶ Described 5 levels of representation
1. Message level
 2. Functional level
 3. Positional level
 4. Phonetic level
 5. Motor level

45

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

46



47

Functional Level of Representation

- ▶ Main Level addressed by Colourful Semantics
 - ▶ Planning of verb semantics [functional argument structure]
 - ▶ semantic content
- via 3 processes →

48

Processes [& potential problems]

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

"Who-does-what-to whom"

49

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*]

50

Errors

Lexical selection error

"I cut dinner my fork"

Verb Semantics error

[Argument Structure error]

"Mum put table"

Assignment error

"Mouse chase cat"

51

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**

52

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**

53

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"

54

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"

55

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

56

Scope of Colourful Semantics

Colourful Semantics supports normal language acquisition skills

57

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*

58

Colour coding

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

Gordon is drawing a picture in his book
v

Gordon is drawing a picture in his book
Gordon is drawing a picture in his book

59

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.

60

Colourful Semantics – basic coding

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	

61

Coding ‘other information’

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

62

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

63







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’*

64

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>	

65

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*

66

1 participant + verb



1 participant + verb

WHO + DOING
I + eat

→ Then increase variety of nouns & verbs

67

Mr Men - WHO DOING



68

Different -1 participant + verb

1 participant + verb

DOING + WHAT
Eating + carrot

DOING + WHERE
go + school

→ Then increase variety of nouns & verbs



69

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

70

2 participants + verb

WHO+DOING+WHAT
I + eat + a carrot

WHO+DOING+WHERE
I + go + to school

→ Then increase variety of nouns & verbs



71

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"

72

Contrast with 'WHAT LIKE' [not verb related]

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



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

73

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

74

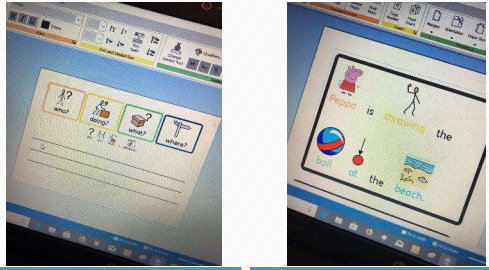
3 participants + verb



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

75

Peppa Pig – iPad



Sentence Strip **Created Sentence**

76

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

77

WHO DOING WHAT WHERE train ☺



78

“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*”

79

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

80

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
Bob the Builder sat in the chair

81

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

82

Principle TWO

Question words
ARE THE KEY TO CODING

Principle two :-

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

83

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?

84

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

85

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

86

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

87

Verb picture -> Who + Doing + What



88

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

89

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”

90

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

91

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!

92

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????

93

Which verbs fit ?

- ▶ The child _____ the flowers
squashes, puts, falls, throws
- ▶ The cat _____
knocks, grows, sleeps, kills,

94

Which verbs fit ?

- ▶ Our friends will _____
congratulate, find, amuse, help
- ▶ You should _____ me a ticket
send , put, keep, pay, accept

95

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/WHERE	[is the action happening]
WHO to	[who is the action done to]

96

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 ?

97

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 ?

98

Verb Activity

'GIVE' - what are the essential questions

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

99

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]

100

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 ✓
My Mum sat on the sofa

101

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?

102

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”

103

Basic colour coding – essential question words

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

104

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

105

Practising the other meaning mantra !!!

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






106

Other information in sentences

»» Not related to verb semantics

107

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>	

108

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] [Allison's]

109

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]

110

'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**?



111

Describing Candy Floss



112

Corridor Display



113

NEM Lang Dev Centre Description words = purple



Modelling 1 x desc word

Written sentence

114

NEM Lang Dev Centre
Description words = purple

Modelling 2 x desc word Written sentence

115

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*

116

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

117

WHO + diamond + DOING

118

Working on auxiliary verbs

119

Working on auxiliary verbs

120

COLOUR CODING – Making Questions

Dad was putting his coat on the chair

Was Dad putting his coat on the chair?

121

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

122

DOING Star WHAT

Washing her hair

123

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

124

Purple joining up words

- ▶ Co-ordination

- ▶ Subordination

125

Purple Joining Up words

Roll a connective

Velcro sentences

126

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**

127

Practising the full meaning mantra [other]

- ▶ Orange words tell us **WHO**
- ▶ Yellow words tell us what they are **DOING**
- ▶ Green words tell us **WHAT**
- ▶ Red 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]
- ▶ (Blue) Cloud words tell us **WHAT** is it **LIKE**
- ▶ Star words tell us **WHOSE**

128

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

129

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

130

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

131

Communication in print – writing sentences



132

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

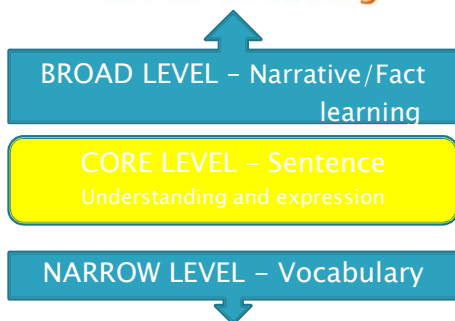
133

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

134

Levels of coding



135

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]

136

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

137

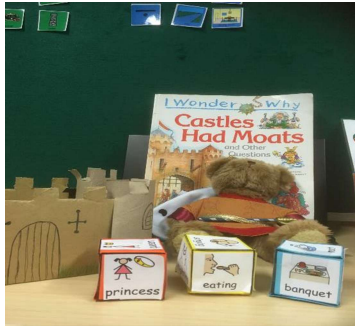
Targeting specific sentence types

- ▶ 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"

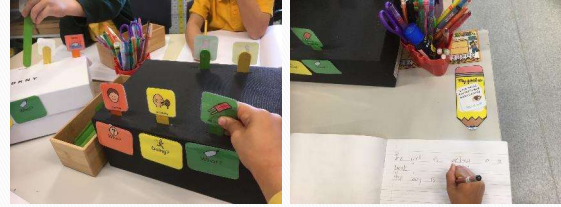
138

Roll a sentence CASTLES



139

Independent sentence writing WHO DOING WHAT



Make a lollipop stick sentence

Write your sentence coding strip support

140

WHO DOING bags



141

Supporting Key word Level/ICW's

Can use colour coding to support

- ▶ Comprehension
- ▶ Description
- ▶ Command

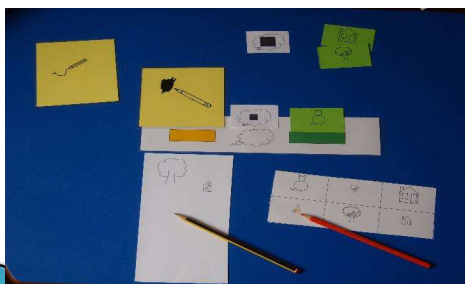
in all Key word level /ICW type activities

e.g. Derbyshire Language Scheme [DLS]

142

3 ICW comprehension – coloured symbols + coloured line

colour /draw big/little cat/house/tree



143

2 key word level – JENSON

- ▶ Bossy Verbs – Throw/Catch
- ▶ Must use 2 content words i.e. not 'catch it'
[learned phrase]
- ▶ Gradually reduced visual support

144

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

145

4ICW Colours +/- symbols



Colours PLUS symbols

Colours MINUS key symbols

146

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

147

Principle THREE

“Gradually reduce the amount of coding support!”

148

Reducing coding support

Lowest levels of support

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



149

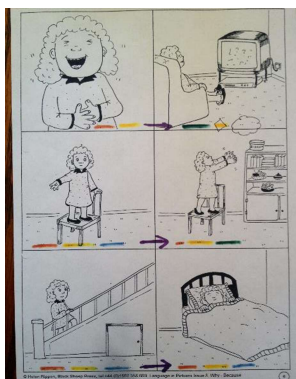
Practising target sentences

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

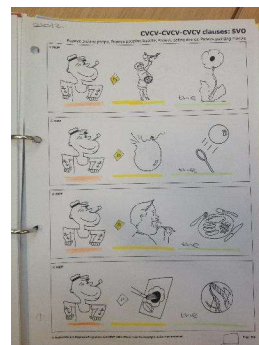
150

Coded lines for 'because'



151

Coding Nuffield SVO sheets



152

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*

153

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

154

Target = 'put' + object + place

(*put* *what* *where*)



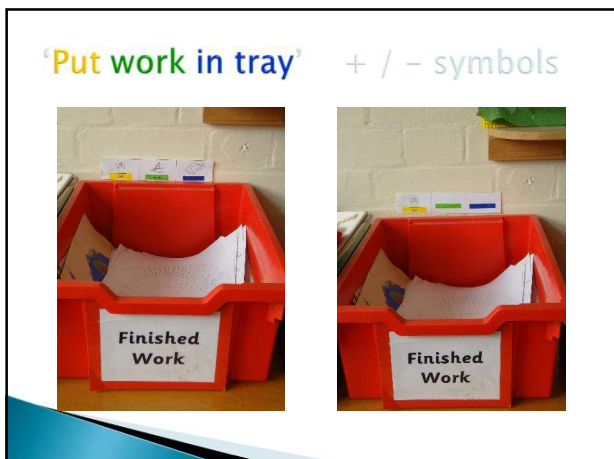
- Stuck up over their peg – coloured line to elicit "*put coat on peg*"
- Stuck on child's table – coloured line to elicit "*put work in tray*"

155

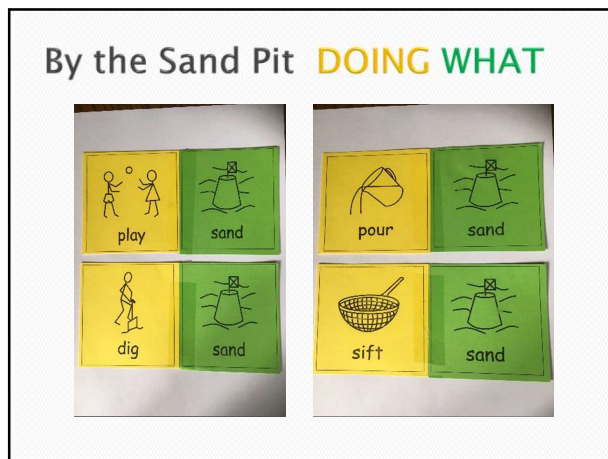
'Put coat on peg'



156



157



158

In Topic Work

- ▶ Often a target sentence can be supported in topic work activitieswith a little preparation

159

Reception – Spin a Sentence WHO DOING WHERE

Spin a sentence board Spin a Sentence area

160

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

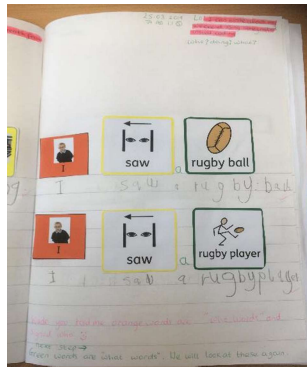
161

In Music

2 key word level: action + object

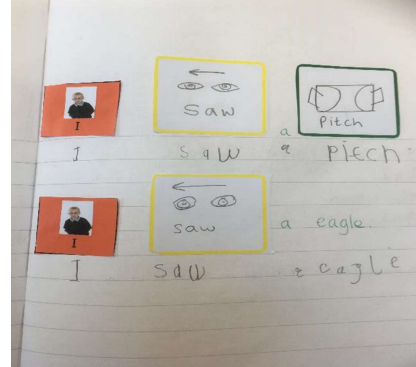
162

Wade Past tense sentences Mar 19



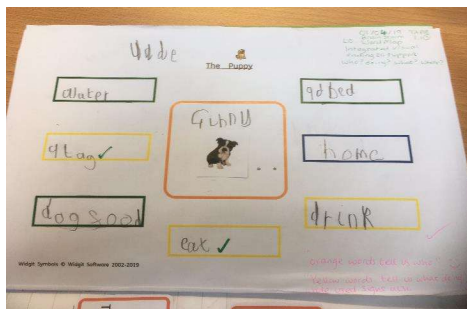
163

Wade Past tense sentences April 19



164

Wade - Mind map for sentence



165

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

166

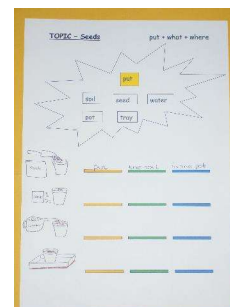
Topic Worksheets

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

167

Topic worksheet - 'Seeds'



168

'Seeds' - cut and stick

water in the pot

seed in the pot

1. put soil in the pot
2. put _____ _____
3. put _____ _____

169

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

170

E.g. 'The Gruffulo'

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

Write words or lay the pictures onto coloured cards

Gruffulo, mouse fox, owl, snake	walk look hide	wood hole logs tree
		wood hole logs tree

171

Recording the sentence(s)

Gruffulo, mouse fox, owl, snake	walk look hide	wood hole logs tree
		wood hole logs tree

- Child then chooses the words to write on a colour line
- or
- Child chooses the pictures to stick on colour line


The Gruffulo is walking in the wood

172


Supporting target sentences in whole class writing

173

Mainstream Reception



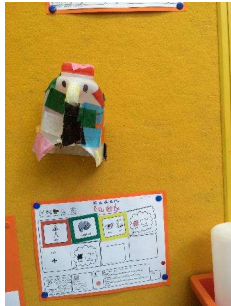
Whole class



Small group with support

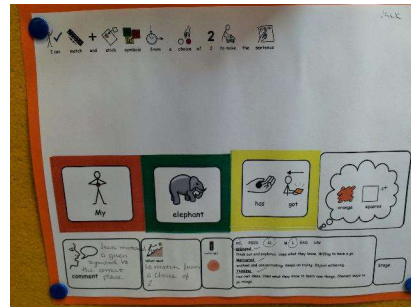
174

MLD KS1 – basic descriptive writing task



175

MLD KS1 – basic descriptive writing task



176

MLD – Writing 'news' KS1



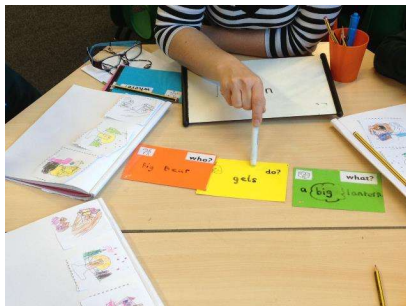
177

Mainstream Year 1 writing task



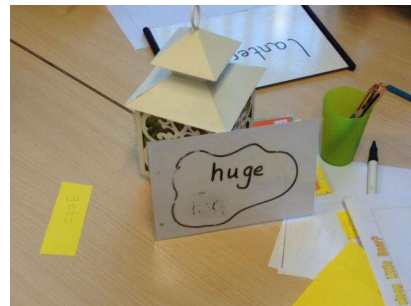
178

TA uses cards to support



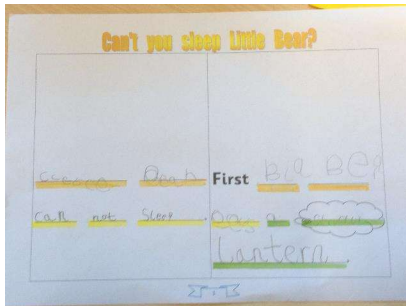
179

Extension activity – harder cloud words



180

Written sentence work sheet



181

Writing more than one sentence !

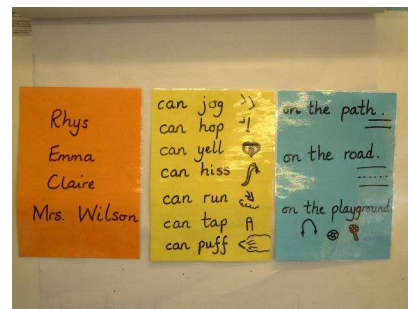
182

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

183

'Things we can do - brainstorm



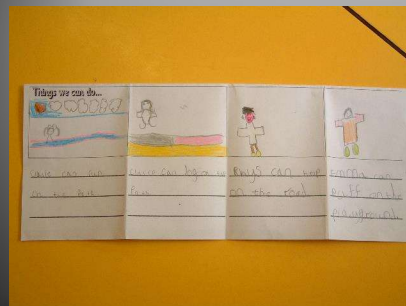
184

Rubbed out words they can spell for themselves



185

'Things we can do' booklet



186

Supporting descriptive writing

Remember

- ▶ Coding works best with a **simple, repeated** structure
- ▶ **YOU** choose the sentence structure.... DON'T try to code what the child gives you

187

Writing Instructions to make 'feely picture'

Non fiction literacy lesson
Year 2

188

Instruction sequence

1. Draw large, big, picture on the card
2. Cut up scraps of material
3. Glue scraps on the picture
4. Feel the scraps on the picture

189

Build a Snowman

ITS



190

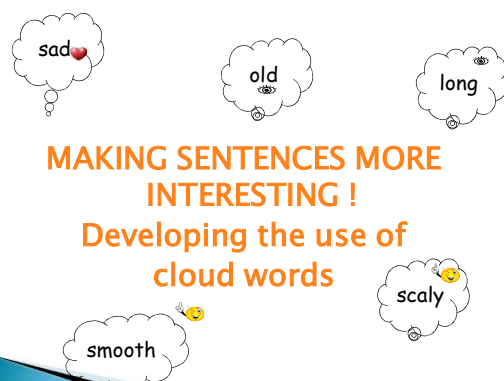
Three Little Pigs

[from - Integrated therapy services]

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

191

MAKING SENTENCES MORE INTERESTING!
Developing the use of cloud words



192

Autumn 'Cloud words' display



193

Use of 'What like' clouds in spoken & written sentences

- ▶ You can develop use of adjectives & concepts by showing how to add 'cloud' words to tell you more about one of the colours

'The **scaly** dragon breathed fire'

'Here the cloud word tells us more about 'what'

194

Use of 'What like' clouds

- ▶ Cloud words are very useful since they can **float about** like real clouds!
- ▶ You can show that the *same* cloud words can float around in sentences

195

The **scary** ghost heard a noise in the forest.

The ghost heard a **scary** noise in the forest

The ghost heard a noise **in the forest** **scary**

196

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'

huge, scary, black, brown

He saw a bear.

197

Year 1 task

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

Who is it ?

What does he look like?

Shrek

big, tall, green, scary

198

Year 1 task

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

Shrek is green

Shrek is big

Shrek is scary

199

Three Little Pigs

[from – Integrated therapy services]

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

200

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.

201

Framework for answers

Why did the brick sink?

Because it was heavy

Why did the feather float?


Because

202

Coming out February 2020

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

203



Available to purchase with a 20% discount

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

NHS Forth Valley

This comprehensive resource pack, developed in conjunction with education staff, draws on the principles of Alison Bryan's original Colourful Semantics approach to provide professionals with an engaging, dynamic way to support children's language development. This practical resource consists of three parts: a printed book containing ready-made session plans, ideas, tasks and written vocabulary cards and worksheets; an online version using the current Colourful Semantics colour coding system; and an online version using the colour coding system used by Speech and Language Therapists from NHS Forth Valley.

20% Discount Available - enter the code FL840 at checkout*

File Size: 547 MB (550,214,448 bytes)
*Offer valid only on the purchase of the print edition and only applies to hard purchased digital versions.

For more details, or to request a quote for more, please contact: Sam Giles, Marketing Manager, sam.giles@nhs.uk

For more information visit:
www.routledge.com/9781032115102




204

Order Details

- ▶ Publisher:- www.routledge.com
- ▶ 20% EARLY ORDER DISCOUNT CODE **FLR40**
- ▶ Pb code : 976-0-367-21050-2
- ▶ Offer Price – £44.79 [£55.99]

205

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	AUXILLARY VERBS [& 'linking verbs']
Sentence joining e.g. 'and, then, so' 'because, although, until	 Joining up words	CONNECTIVES/ CONJUNCTIONS

206

Supporting Sentence Understanding

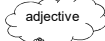
Don't forget coding can support understanding too

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

207

1. Following instructions

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

action +  adjective + object

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

208

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"

209

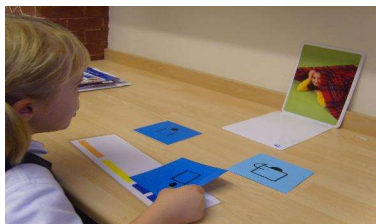
2. Understanding parts of sentences

- ▶ 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

210

Understanding prepositions



Selecting the correct preposition symbol to go with the picture

211

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

212

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

213

Understanding Question Words



214

Teaching Question words

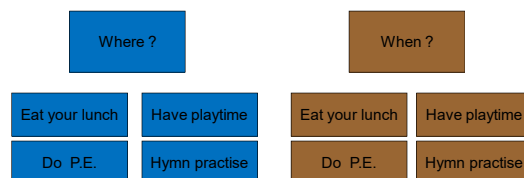
You can teach understanding of *question words*

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

215

Using coding to teach understanding of question words

Understanding 'where' v 'when'



216

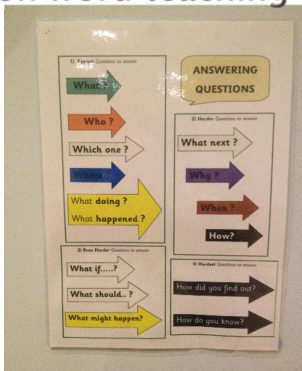
Using coding to teach understanding of question words

Understanding 'where' v 'when'

Where ?		When ?	
Eat your lunch	Have playtime	Eat your lunch	Have playtime
Do P.E.	Hymn practise	Do P.E.	Hymn practise

217

Question word teaching order



218

MLD KS1 - Coded symbols for all reading books !



219

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.

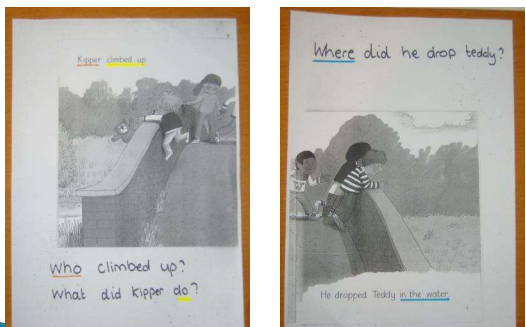
220

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

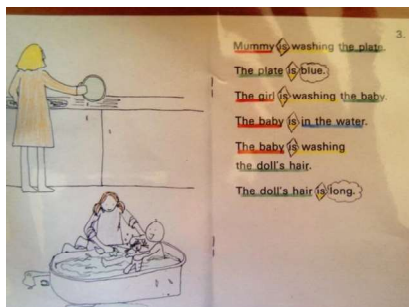
221

Coded Text Comprehension



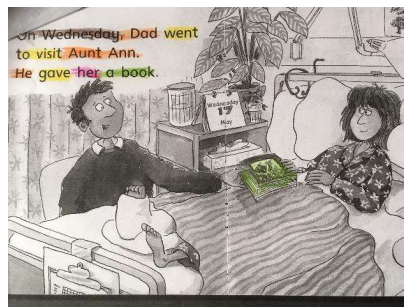
222

Coded Text Comprehension – LTR



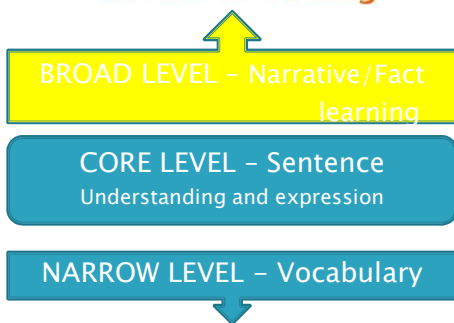
223

Aunt Anne Goes To Hospital



224

Levels of coding



225

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** [where]
- ▶ Drop coded structure when child is ready

226

Types of Narrative Support

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

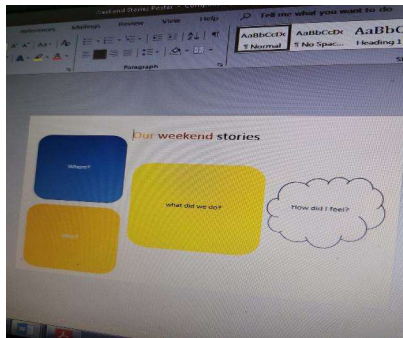
227

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

228

Weekend Narrative



229

Story Structure Sticks



230

Example :- Simple Narrative Structure

when	who	(One day there was a boy)
		and
who	where	(The boy was in the park)
		and
who	doing	(The boy was playing)

231

Example:-Simple Narrative Structure

when	who	(One day there was a boy)
		and
who	where	(The boy was in the park)
		and
who	doing	(The boy was playing)

232

Example:-Harder narrative for familiar text

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

233

Example:- Harder narrative for familiar text

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

234

Resource : Black Sheep narrative packs

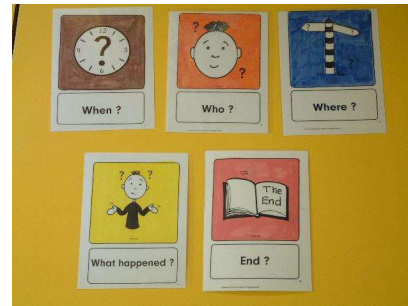
- ▶ Nursery Narrative Pack
- ▶ story components:- *who, when, what next*

- ▶ Reception Narrative Pack
- ▶ story components:- *who, where, when, what happened next*

- ▶ Fun with Narrative [big books]

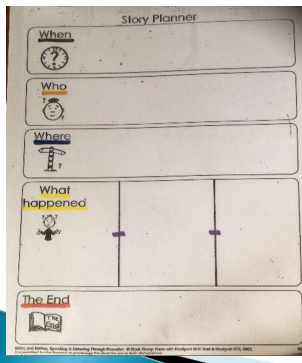
235

Reception Narrative – colour coded cue cards



236

Black Sheep Press Story Planner

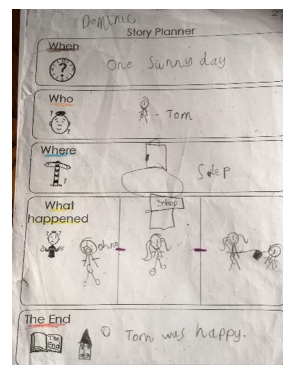


- ▶ WHAT HAPPENED divided into 3 sections

- ▶ Purple joining up words

237

BSP Story Planner –Quick Draw



238

Story options – Creating the Story Starter



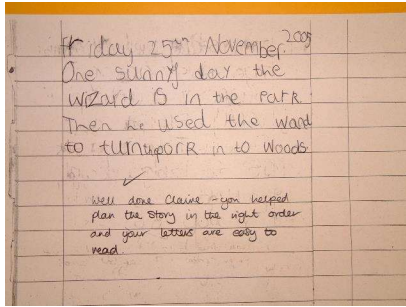
239

Selecting cue cards



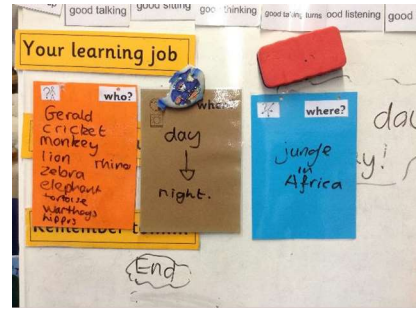
240

Written story



241

'Giraffes Can't Dance' – Brainstorm story content



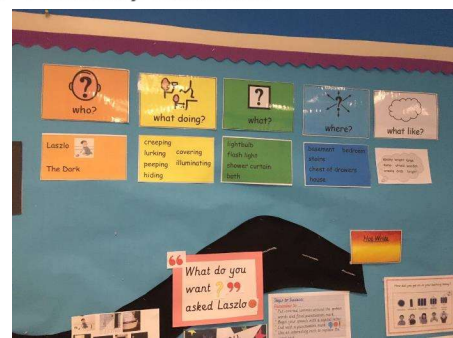
242

Giraffes Can't Dance – Creating own narrative



243

Key Text Vocabulary – The Dark by Lemony Snicket



244

Narrative Vocab Flip Books



Wall Display

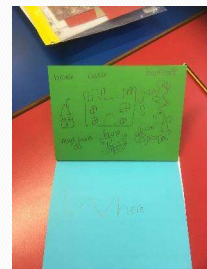


WHO

Narrative Vocab Flip Books



DOING

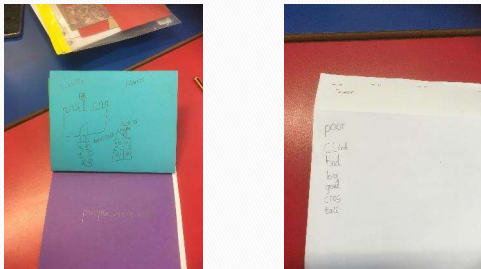


WHAT

245

246

Narrative Vocab Flip Books

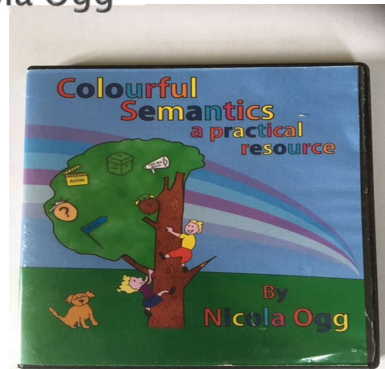


WHERE

What LIKE

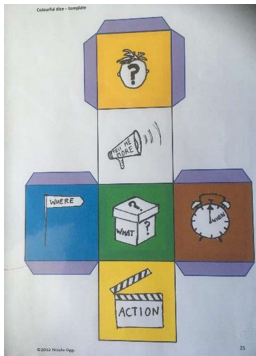
247

Nicola Ogg -



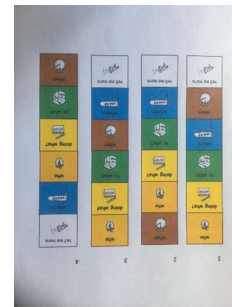
248

Nicola Ogg - Story Dice



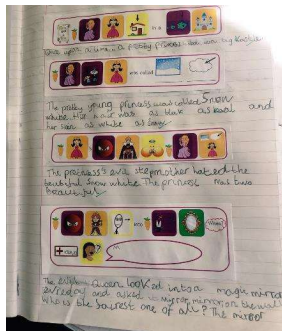
249

Nicola Ogg - Bookmark Prompts



250

SNOW WHITE - Full sentence support

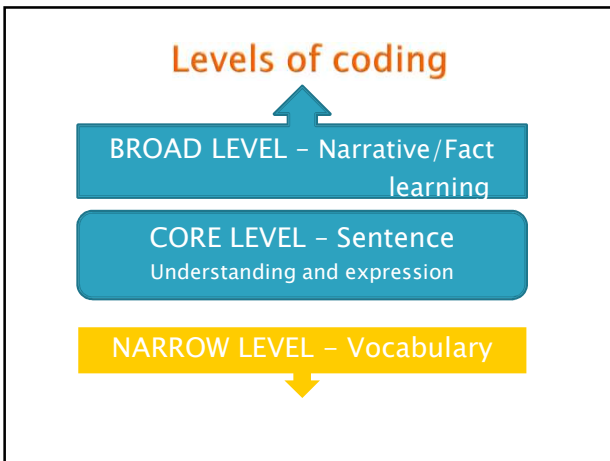


251

Table Top reminders



252



253

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

254

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.

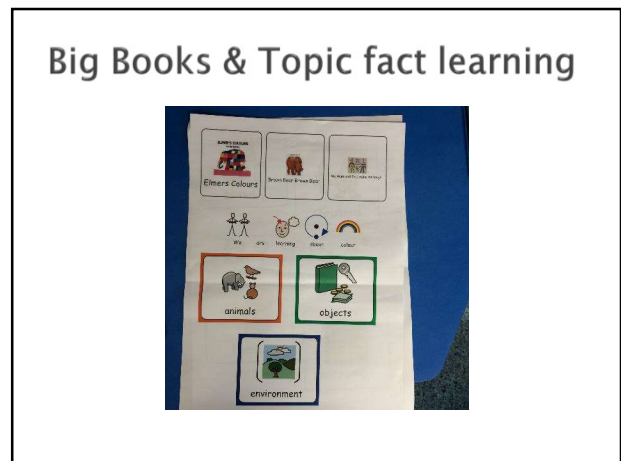
255



256

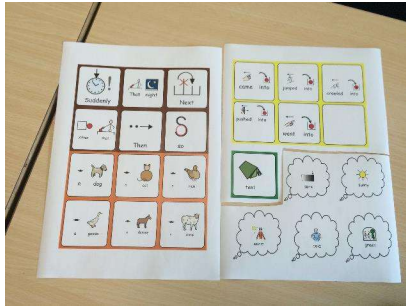


257



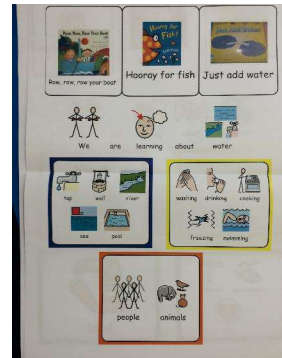
258

Vocab from class text → own sentence creation MLD school



259

Topic Vocab summary sheet



260

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? 1874 -1965
- > What did he **do**? Led country. Smoked cigars
- > **What** was his job? Prime Minister
- > **Where** was his office? 10 Downing Street
- > What was he **like**? etc Short, balding, clever, good communicator

261

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? 1874 -1965
- > What did he **do**? Led country. Smoked cigars
- > **What** was his job? Prime Minister
- > **Where** was his office? 10 Downing Street
- > What was he **like**? etc Short, balding, clever, good communicator

262

Similar vocabulary

Coding can be used to clarify the meaning of similar words

prison
where?
where?

prisoner
who?

A burglar
Who did it?

Burgled
What did he do?

A burglary
What is the crime?

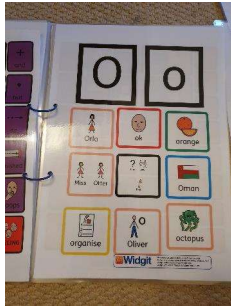
263

Colourful Semantics in Schools



264

Supporting phonics – alphabet book



265

Supporting phonics – sentence



266

Mainstream KS1 YEAR 1

Mainstream and DLD Base

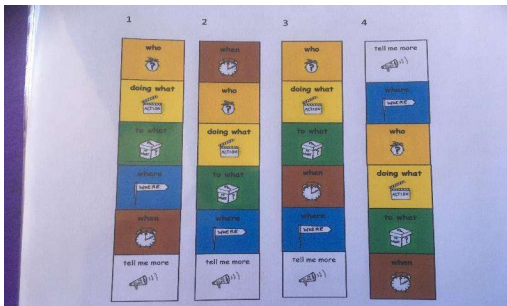
267

Sentence Builder



268

N. Ogg – Bookmark Prompts



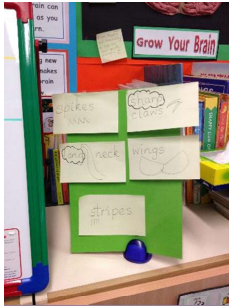
269

Creating a riddle with 'dinosaur' DOING words



270

Creating a riddle with 'dinosaur' WHAT words



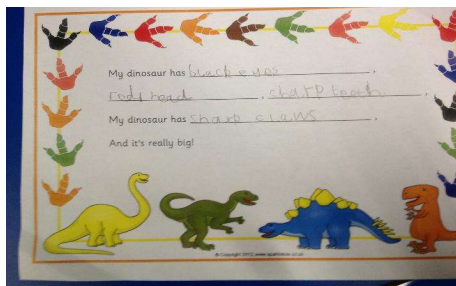
271

Riddle framework



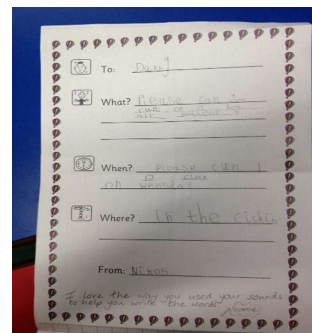
272

Completed riddle



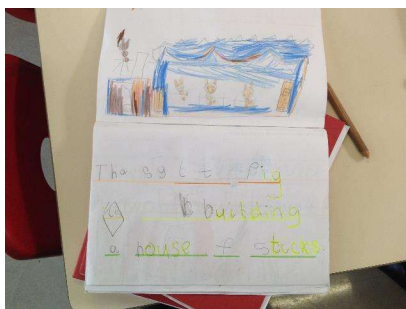
273

Party invitation



274

Sentence writing Support



275

Mainstream KS1 YEAR 2

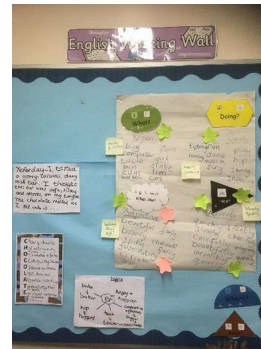
276

Year 2 - Mainstream Wall Display



277

English Writing Wall Brainstorming Adjectives and Adverbs



278

Mainstream KS2



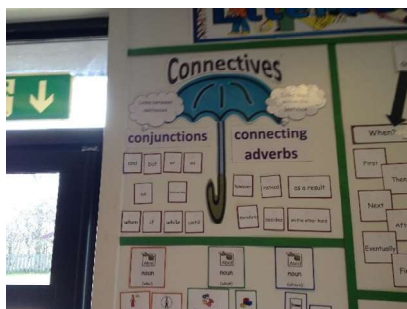
279

KS2 - 'GRAMMAR' - Wall Display



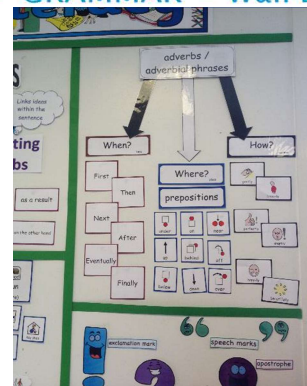
280

KS2 - 'GRAMMAR' - Wall Display



281

KS2 - 'GRAMMAR' - Wall Display



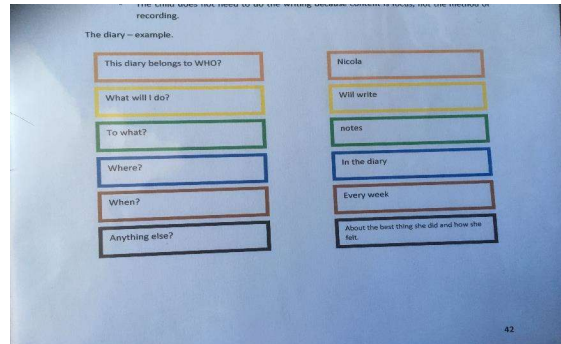
282

KS2 - 'GRAMMAR' - Wall Display



283

N. Ogg - Diary



284

MLD Primary School - WHOLE SCHOOL APPROACH for literacy

MLD - Coding up in every class



Year 3/4

Year 5/6

285

286

CORE LEVEL - Sentence support - spoken and written

Symbol Wall - *Scottish colours*



287

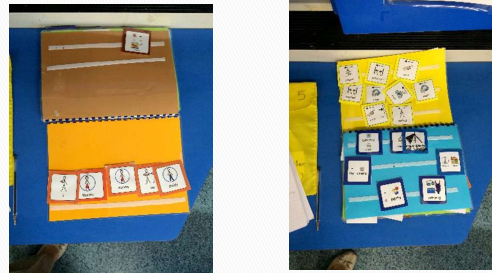
288

MLD School – class resource



289

Vocab books – early years



WHEN + WHO

DOING + WHERE

290

Sentence strips – selected vocab



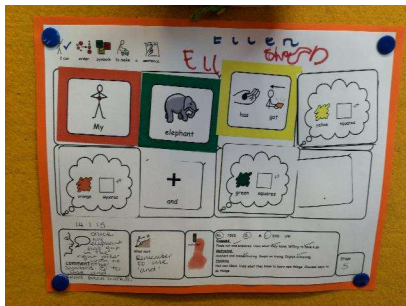
291

Another class resource – Year 2/3



292

Elmer sentence 'writing'



293

Class News Strips resource – MLD



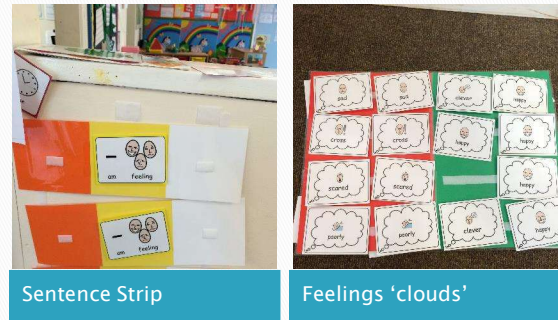
294

Sentence strips for 'news'



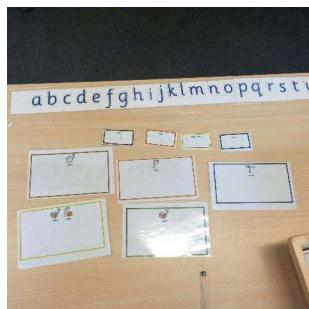
295

Feelings - WHO + DOING + CLOUD



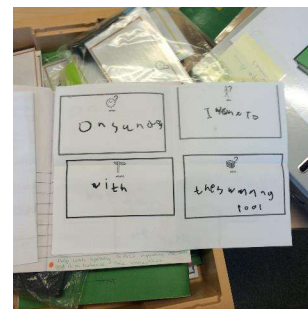
296

Sentence writing - individual cards for each coded element



297

Sentence writing - individual cards for each coded element

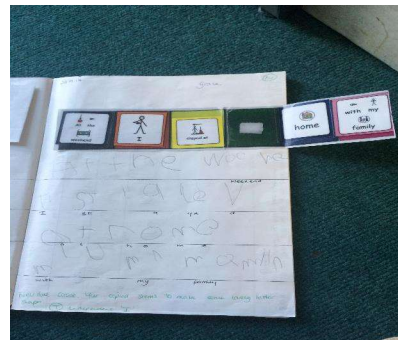


298

Pupil progression

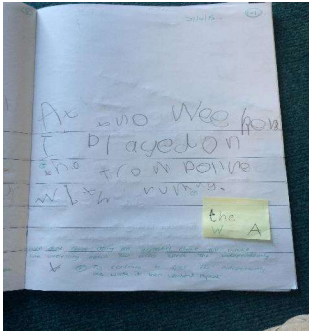
299

Grace - Sept 14 Ordering symbols & letter copying



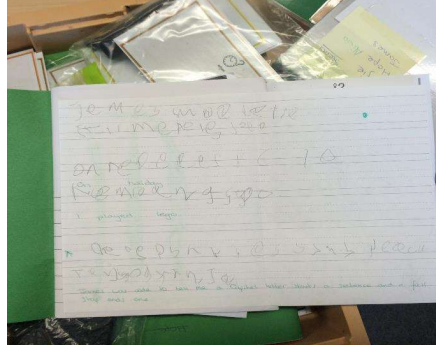
300

Grace - April 15
Independent writing



301

James Sept 14
Independent writing



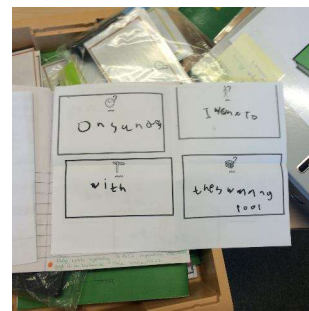
302

James Sept 14
Sentence symbol strip



303

James - April 15
Using Large Blanks



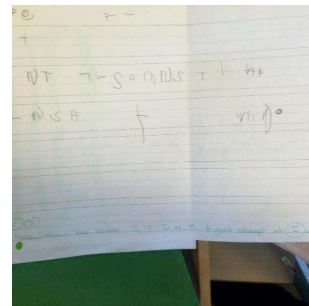
304

James - May 15
using small blanks



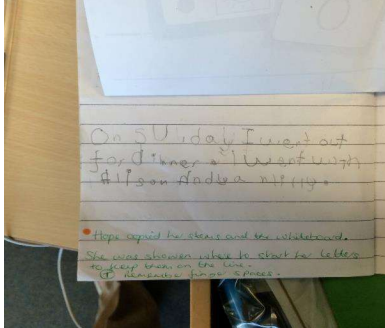
305

Hope - Year 5 Sept 14
Independent writing



306

Hope - year 5 May 15
*Independent writing - from own Symbol
 Sentence strip and spellings on board*



307

Name labels - ORANGE



308

ANY QUESTIONS?

309

References

1. **Black M & Chiat S** (2003). *Linguistics for Clinicians* London:Arnold
2. **Bolderson S et al** (2013) *Child Language, Teaching & Therapy*. Colourful Semantics: A clinical investigation
3. **Bryan A.** (1997) Colourful Semantics. In Chiat S., Law J & Marshall J. (Eds) *Language disorders in children & adults: psycholinguistic approaches to therapy*. London: Whurr
4. **Bryan A.** (1998) Colourful Semantics 2. In *Proceedings of 1998 NAPLIC conference "Language Impairment: theory and practise"*.
5. **Bryan, A., Bolderson, S., Coelho, C. & Dosanjih, C.** (2007). Colourful Semantics: Application in school settings. Afsaic 4th International Symposium: Unlocking speech and language. University of Warwick, UK
6. **Chiat S.** (2000) *Understanding Children with Language Problems*. London: Cambridge Univ. Press [Parts II & III]

310

References cont'd

6. **Ebbels S.** (2007) *Child Language, Teaching & Therapy* Teaching grammar to school aged children with SLI
7. **Hettiarachchi, S.** (2015) The effectiveness of Colourful Semantics on narrative skills with children with intellectual disabilities. *Journal of Intellectual Disabilities* 2015
8. **Jager J. J.** (2005) *Kids Slips:- What young children's slips of the tongue reveal about language development*. Laurence Elbaum Associates.
9. **Jones, E.V.** (1986). Building the foundations for sentence production in a non-fluent aphasic. *British Journal of Disorders of Communication* 21;1 p63-82
10. **Garrett M** (1988) Processes in language production. In FJ Newmeyer (ed) *Linguistics: The Cambridge Survey*, Vol 3. Cambridge University Press.
11. **Pinker S.** (1989). *Learnability & Cognition: the acquisition of argument structure*. MIT Press.

311