



Early Years & Primary Education Training Website: downs-syndrome.org.uk Email: info@downs-syndrome.org.uk Gillian Bird





This webinar explores education for learners who have Down's syndrome aged from 4 to 11 years. The presentation is divided into four areas:

- 1. Understanding a 'learning profile' of associated characteristics including memory, cognition and health, speech, language and communication, literacy and numeracy
- 2. Social inclusion and belonging
- 3. Examples of adaptations for inclusive teaching and learning
- 4. Behaviour support



About Down's syndrome

Abilities and progression vary widely

- Always socially include for chronological age, think this way from nursery onwards
- As for any child, don't try to predict the future A pattern of associated characteristics, or 'learning profile' Some health conditions are more common Like everyone, people who have Down's syndrome have:
 - own personalities
 - things they like and dislike
 - own ambitions, interests and talents

About Down's Syndrome videos https://www.downs-syndrome

Genetic condition with an extra chromosome 21 in all or some cells





1. 'Learning Profile' and implications

Publications

Down Syndrome International (DSi)

Education Guidelines published July 2020

https://www.ds-int.org/education

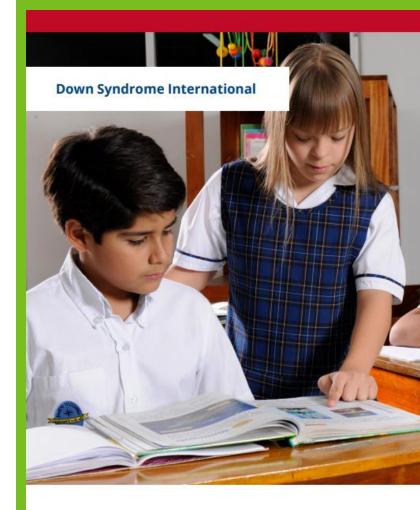
(Key considerations; guidelines for leading, teaching, learning).

Educating Learners with Down Syndrome.

Research, theory and practice with children and adolescents. 2014. Edited by Rhonda

Faragher & Barbara Clarke, Routledge.

A Practical Guide to Educating Learners with Down Syndrome: Supporting Lifelong Learning Rhonda M. Faragher 2023.



International Guidelines for the Education of Learners with Down Syndrome





Recommendations for Leading

- Time for teachers to plan
- Shared vision of inclusion
- Work in partnership with families
- Teachers responsible for learning of all students in class
- Teachers must guide the work of teaching assistants



Recommendations for Teaching

- Teacher training & professional development
- Teach curriculum for the year group, adjusted to enable engagement with learning outcomes
- Where an individual education plan is used: teachers, one family member/advocate & student included in process
- Understand and support behaviour





- In mainstream classes for age
- Withdrawn as infrequently as possible
- Equal right to the curriculum (not based on what someone thinks a child needs for adulthood)
- Academic achievement should be expected
- Teachers aware of likely characteristics and need for adjustments





Associated characteristics or 'learning profile'

- Vision
- Hearing
- Speech, language and communication
- Memory and cognition
- Fine and gross motor skills
- Health



Recommendations

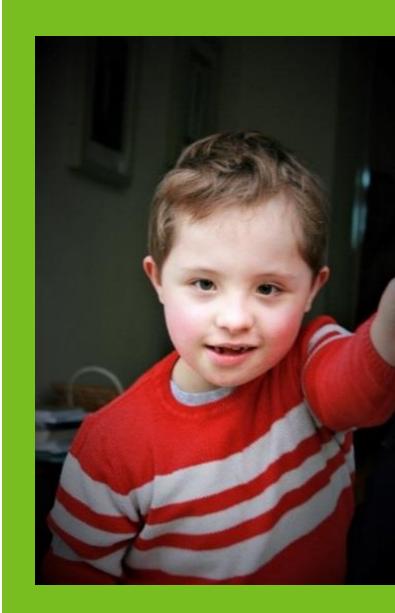
- Vision and hearing management
- Speech and language therapy & promotion of speech clarity and fluency
- Adjustments as required for additional needs (e.g. ASC/ social communication)
- Take into account verbal working memory and manipulation of information in working memory
- Use visual supports including written words
- Encourage active movement and participation





Individual needs

- Unique different needs
- High expectation
- Skilled teachers
- Next steps
- Engaging activities
- Welcome and socially included, whole school
- Additional support
- Communication the team and parents





Use the framework for ALL children's learning and development

Some ways to support success:

- set up for learning by imitation
- daily practice of targeted skills
- plan activities that become routine
- support positive behaviour and friendships
- use strengths/interests, support relative difficulties
- share expertise what works well?





Learning profile: advance information

The Emerging Down Syndrome Behavioural phenotype in Early Childhood: Implications for practice. D J Fidler, 2005, Infants and young children, 18,2, 86-103

Relative strengths in some aspects of:

- visual processing
- receptive language (vocabulary)
- nonverbal social functioning

Relative weaknesses in:

- gross motor skills
- expressive language skills





Relative strengths

- Social skills/social understanding
- Self help and daily living skills
- Visual spatial memory
 - Remember things more easily when presented visually
 - Learning by imitation
 - Strength in reading and many other visualspatial activities



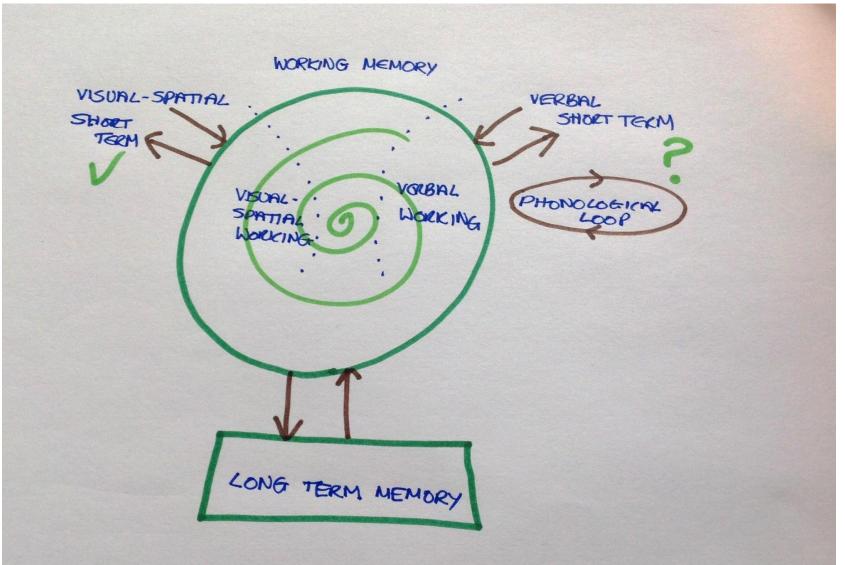


Relative challenges

- Speech and Language Development
 Significant delays with
 expressive language
- Hearing and Vision
- Verbal short-term & working memory
 - learning from listening (alone)
- Motor skills









Specific visual-spatial learning strengths

- learning by imitation
- often strengths in ICT, reading or visual arts Specifically poor verbal short-term memory Capacity for manipulating information in working memory
 - attention and learning in listening situations (visual supports)
 - some children have ADHD, improves over time
- Mental arithmetic
 - overcome barriers with visual tools and calculator
- Visual and visual- spatial supports, copy a model



Supports for attention (staying on task, fatigue)

- Provide range of shorter activities
- Change of level of activity
- Provide physical breaks get up, move around
- Additional activities ready if student finishes planned activities early
- Keep visual / use ICT
- Rewards built into timetable to keep motivated
- Space from adult support





Visual acuity





Use bigger size font

Darker font

Bigger contrast

Include in EHCP

Go over faint lines in black Black felt pens

BIG and BOLD



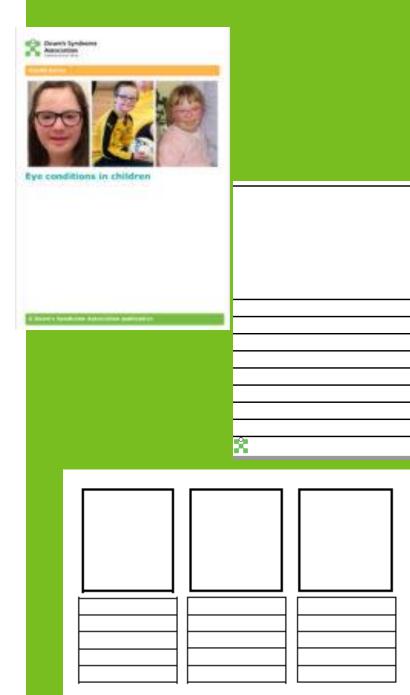
DSA Eye conditions in children

DSA Children – vision, eye tests and glasses

DSA Writing Half page lined paper, storyboard, visual motor foundation skills for drawing and writing Personal Child Health Record (PCHR) 2020 DSMIG UK & Ir Cardiff centre for vision research, Dr Margaret Woodhouse OBE

https://www.cardiff.ac.uk/downs-syndrome-vision-research-unit

<u>Video: https://www.downs-syndrome.org.uk/about-downs-syndrome/health-and-wellbeing/eyes/</u>





Gastrointestinal Problems in Children; Diabetes

Sleep

Oral Health Care for Children

Epilepsy

The Heart

<u>Children – Vision, eye tests and glasses;</u>

<u>Hearing</u>

Respiratory infections

Thyroid Disorder

<u>Leukaemia</u>

Orthopaedic issues

<u>Inflammatory Arthritis in Children</u>

Neck Instability

Infections and immunisations

Co-written with Down Syndrome Medical Interest Group UK & Ireland.

DSA parent referrals





- Majority of children have glue ear (conductive hearing loss)
- Some have sensory-neural loss, auditory nerves
- May only hear /store parts of words
- Address hearing difficulties get relevant checks and address needs





Management - hearing aids, grommets

Attention skills - verbal and visual

Environment - easy to listen in & easy to see in

Listening resources - instruments, songs,

sounds, activities

Get visual attention before starting to speak

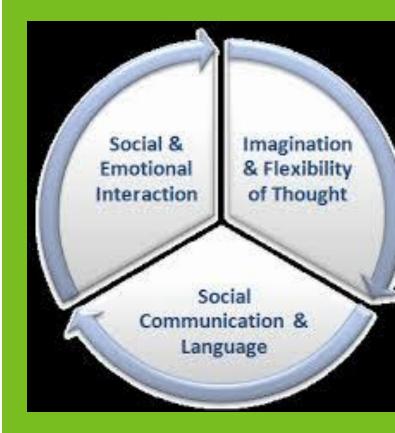
Reduce background noise Soundfield system in classrooms

Speak clearly but naturally





- Autism in children who have Down's syndrome substantially higher
- More behaviour concerns than children who have Down's syndrome only
- Early detection essential for provision of appropriate interventions
- The 'atypical' profile may delay recognition and implementation of appropriate autism interventions
- A 'buffer of social competence'





Motor skills

- Specific delay in gross motor skills
- Similar pattern of development but more flexible ligaments
- Improves during childhood
- Active movement and participation
- All read 'Neck instability' document.





Neck instability in people who have Down's syndrome



Speech, language, communication overview
Contributing factors - hearing loss, delayed development
Plus verbal processing difficulties - phonological (units of sound), morpho-syntactic (small words and parts -s,-ed, -ing)
Receptive vocabulary strength - high expectations
(*curriculum access)

Understanding > expressive abilities – big difference for some, can be underestimated Expressing thoughts and feelings

Need time to process information and respond

Communication: asking for help/information

Speech clarity and fluency- difference, be proactive

Some children have social communication impairment > dual

diagnosis ASC

NEED FOR COMPREHENSIVE ASSESSMENT



Communication Serie



D1. Early Language: Developing Understanding

Understanding Words, Understanding Sentences

A Down's Syndrome Association publication



Communication, responsive, joint attention......

- Developing understanding
- Using visual supports (resource links)
- Developing first words
- Personal books
- Symbolic sounds & early vocabulary
- Early vocabulary, pictures and words
- Listening cards
- Nursery rhymes
- DSA services
- Visit website for resources





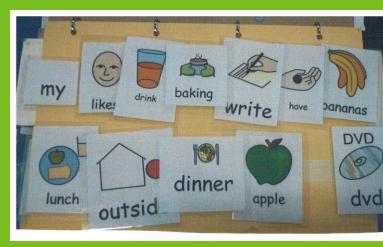


Supports for communication

- •Signs
- Pictures, symbols, words, ICT
- Interactive timetables
- Personal books, Conversation diary
- Sorting tasks with pictures/words ('Listen To Me' communication)
- Acting/role play/drama puppets

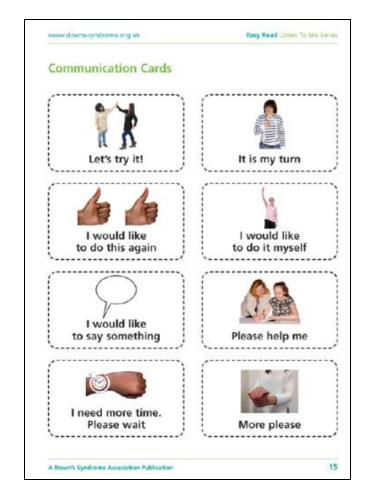








I like	O.K.	I don't like
	9	-





Listen To Me Series



Listen To Me

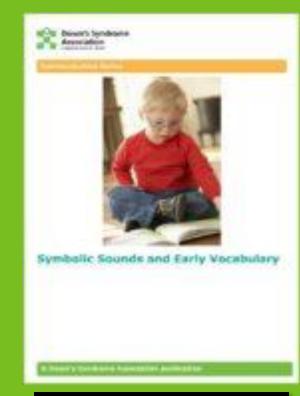
Communication 3-12 years Easy Read

A Down's Syndrome Association Publication



Symbolic Sounds and Early Vocabulary list

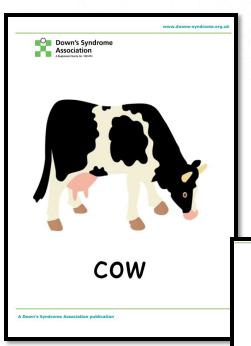
- Understanding comes before expression
- Nouns animals, dressing, everyday items, family and people, home, food, body, transport, play, outside words
- Verbs action words experienced everyday
- Adjectives describing words, quantity,
- size, personal qualities
- Prepositions in, on, under, up, down…
- Social words hello, bye-bye....



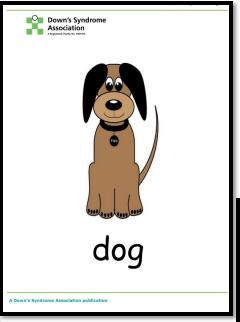




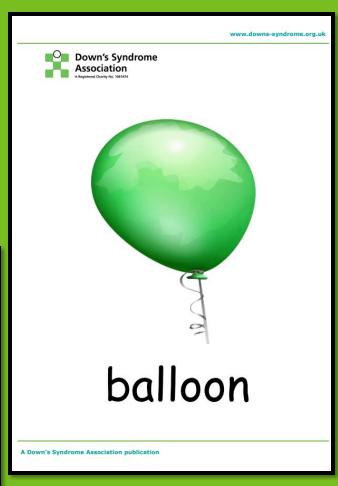
First words: resources for listening for sounds and vocabulary practice





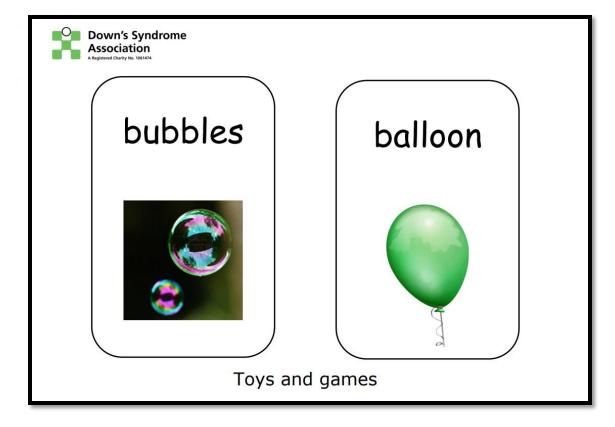


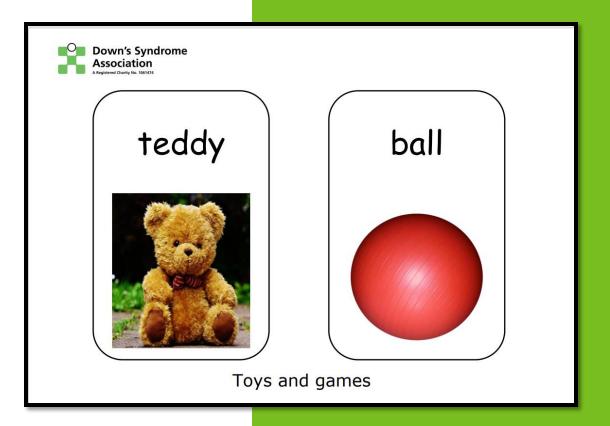






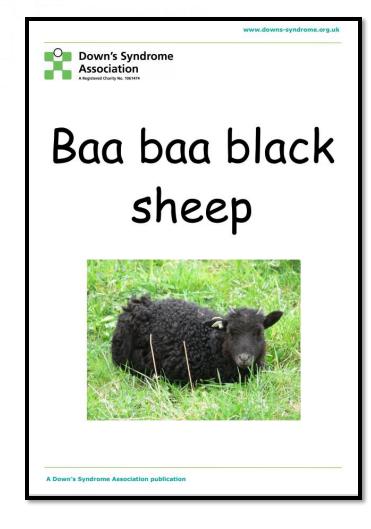
First words: toys

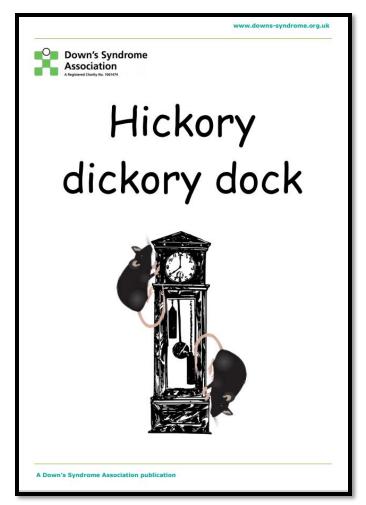


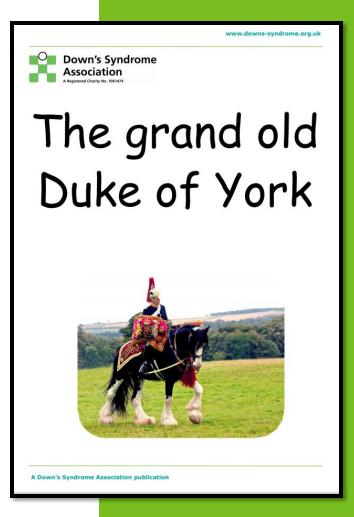




Song cards for choosing

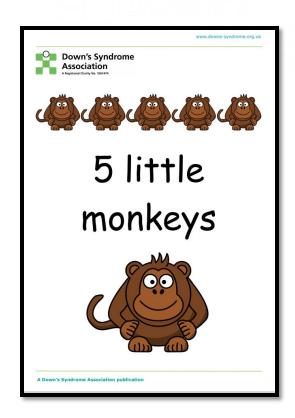




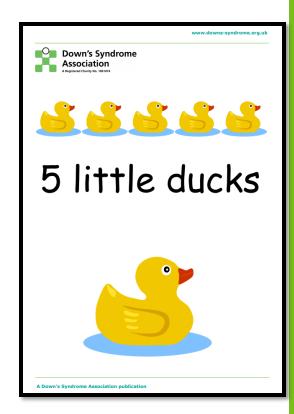




Number songs



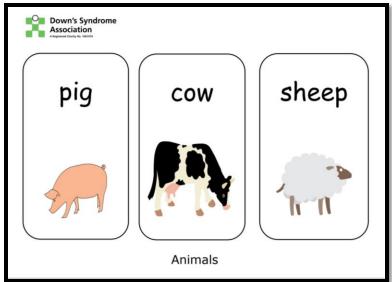


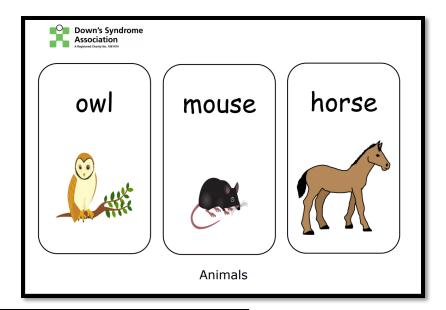


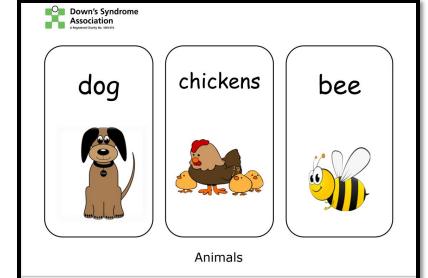


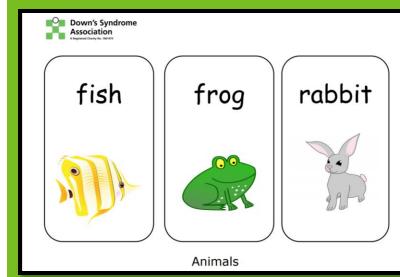


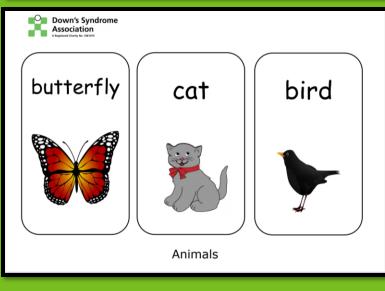
Animal vocabulary





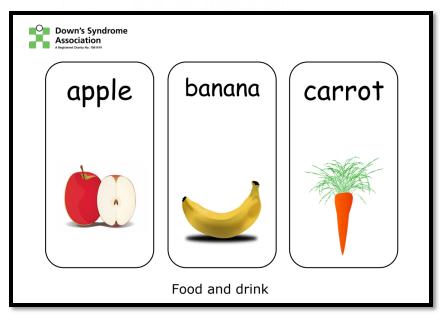


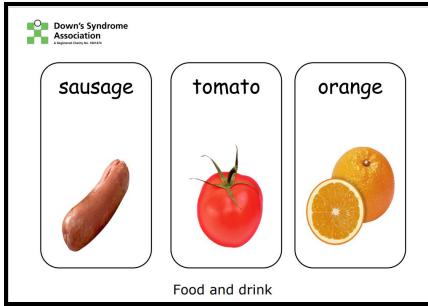


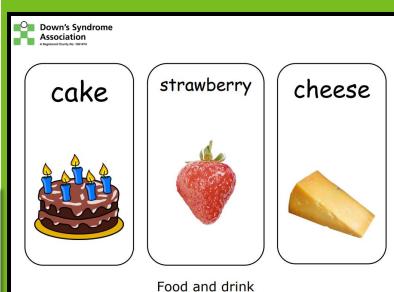


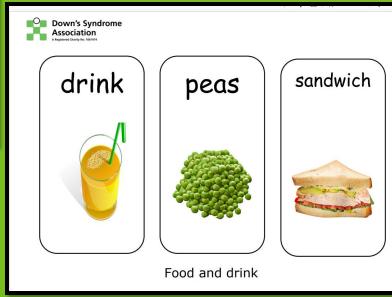


Food vocabulary



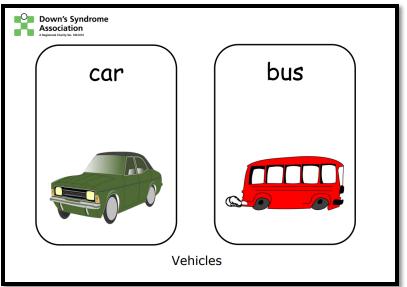


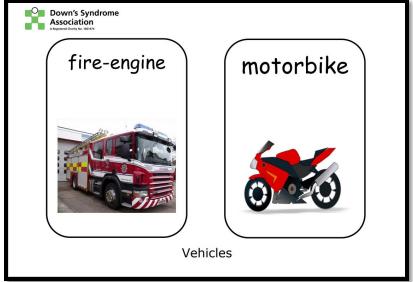


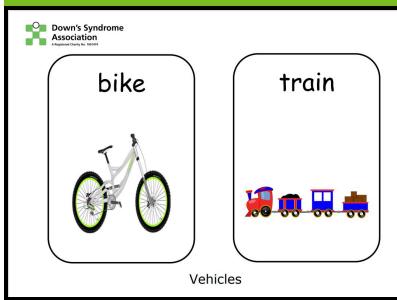


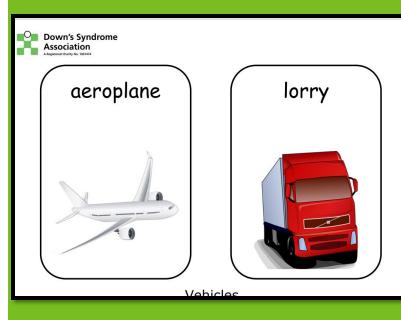


SYNDROME ASSOCIATION Transport vocabulary











How skills develop

Receptive skills

First words understood 50 – 100 words: word combinations ** 250+ words: understanding grammar

** Visual supports
Visuals can support practice e.g.
written words, signs, pictures....

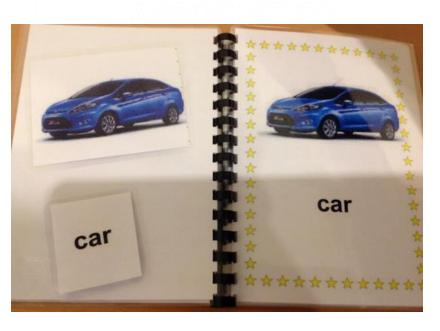
Expressive skills

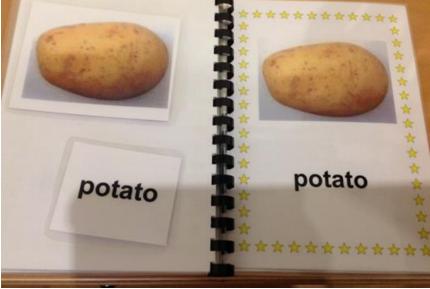
Single word expression
50+ words - word
combinations **
250 + words - word order,
grammar

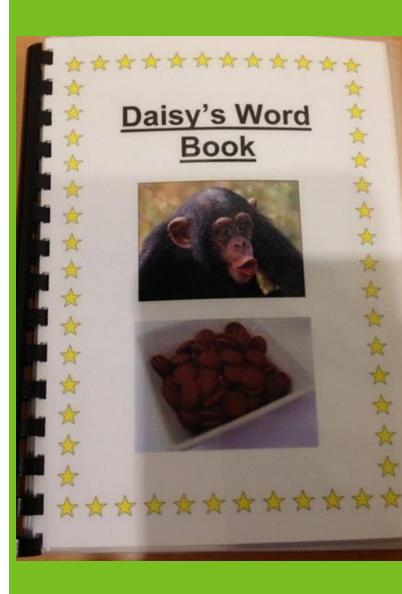




Personal vocabulary books with matching pictures and words (homemade)









Two-word personal book

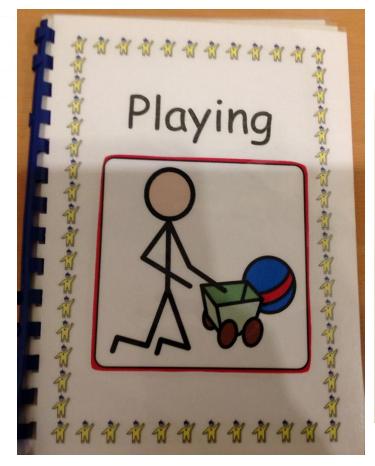
- Word match board, single words on card to match
- Picture and phrase book
 e.g. pages for Eva clapping, Papi clapping, Mummy clapping, Pablo clapping, with photos.
- Make personal books for early verbs e.g. sleeping, eating, drinking etc

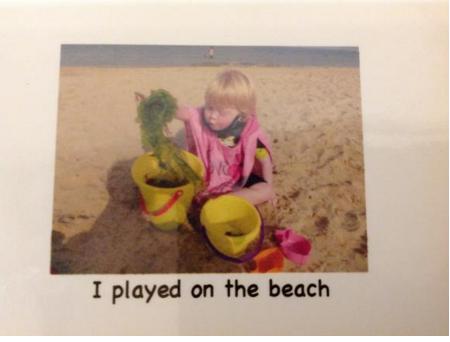
Eva	Рарі
Mummy	Pablo





Personal books with three and more words, for sharing





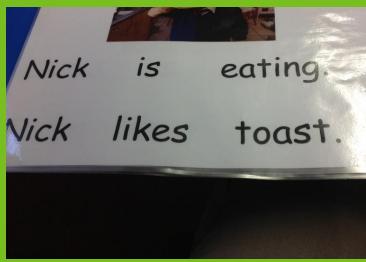




Supporting language and grammar with sentence and picture books

- Make personal books that support and challenge the learner's language level
- Make focused personal books to practice a particular target – e.g. plurals, negatives, pronouns







Science



I am holding a snail.



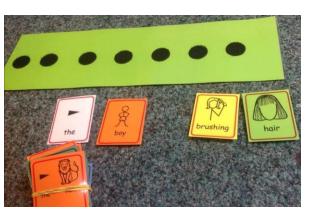
- Model 2- and 3-word phrases (word order e.g. boy eating banana)
- Imitate what the child says and expand on it
- Use visual cues such as pictures and props/objects/toys, signs
- To model/teach
- And for the learner to use to act out/recall
- Use open-ended questions e.g. tell me more, wow, that's interesting..... (rather than closed questions for 'yes' 'no' answers)



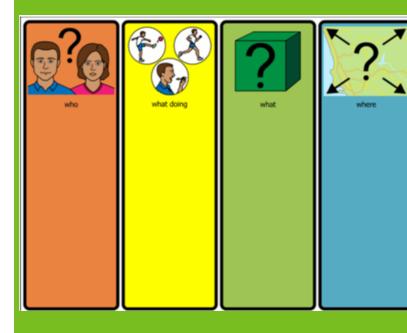
Language teaching resources

 Consider language teaching resources such as Colourful Semantics and Shape Coding (Susan Ebbels)













Moving language forward

- Expand vocabulary
- Comparatives bigger than
- Prepositions in between, next to, beside
- Pronouns he/she, him/her, his/hers,
- Why/because
- Connectives
- Sentence structures; complex sentences
- (You can still use personal books)





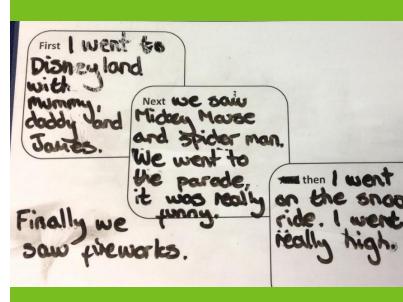
- Look at story books together, describe what you see – tell a story
- Refer back to information in a story/film 'What part did you like best?'
- Recall/sequence the steps of an activity
- first, next, last
- Use props (paper characters from book on lolly sticks)
- Who, What, Where, Why, When, How Visual supports, various: symbols, written word cards, story board





Skills for understanding and telling stories and describing events

- Need wide vocabulary
- 'Time' vocabulary, such as yesterday, the other day, before, next
- Past tense constructions in sentences





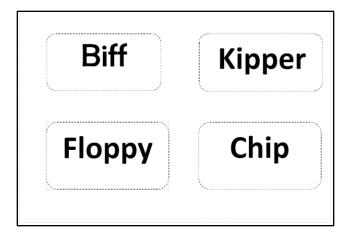
Speech skills practice

- Listening, Discrimination, Production
- Sound level, word level, phrase/sentence level
- Word structures e.g. syllables
- Don't correct speech model back
- Allow extra time for responses
- Sounds in isolation: vowels, consonants, clusters
- Combining sounds together....
- Graded practice: Ask speech and language therapist
- Many suitable resources
- Oral motor skills blowing, sucking, chewing



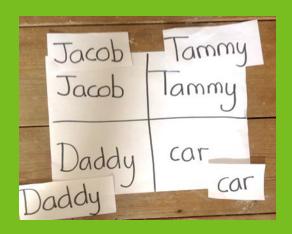






Teaching reading – whole words <u>and</u> phonics

- Learn from whole word sight recognition
- Also teach phonics
- Make reading fun
- Make meaningful use for communication
- 'Conversation diary'
- Requires teaching and practice



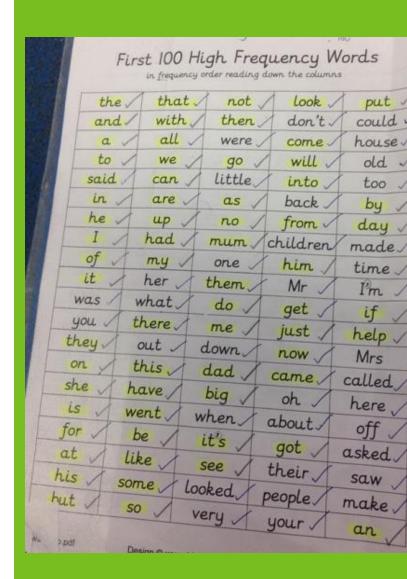






Follow steps in a comprehensive programme for teaching reading

- E.g. Letters and sounds/phonic programme Graded reading books Whole word learning/cards
- Phonic programme: letter sound knowledge, blending, segmenting...
- Precision teaching
- Reading interventions
- Homework
- Daily practice
- Model, support success





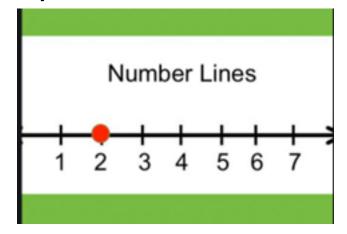
Reading and language comprehension

- Listening comprehension
- Point to pictures
- Match sentence (on a strip) to a picture
- Act out (find/make props to help)
- Vocabulary understanding check, revise
- Question asking and answering
- Modelling and scaffolding
- Retelling, acting, picture and sentence sequencing
- Repetition
- Writing, Cloze
- Graphic organisers e.g. concept maps, mind maps, story boards

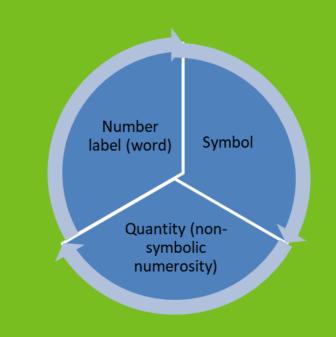


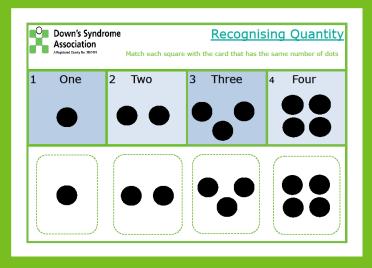
Number

- Subitising
- Relative strength in the use of symbols for the development of number concepts
- De-emphasis on verbal count as a prerequisite
- Findings not unique to learners who have Down's syndrome



1	2	3	4	5	6	7	8	9	10 *
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30 *







Number concepts

 Number awareness: songs, games; displays;

(DSA nursery rhymes in the communication series)

• 1:1 correspondence



 Stable order (reduced sequence, more errors)



-	1	2	3	4	5	6	7	R	9	10	
	1	2	3	4	5	6	7	8	9	10	



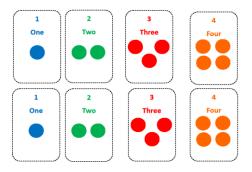


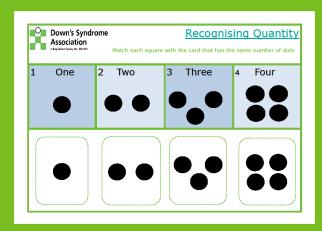


Number

Cardinality





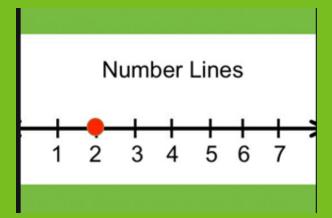


- Quantity games play and other learning activities
- Numicon

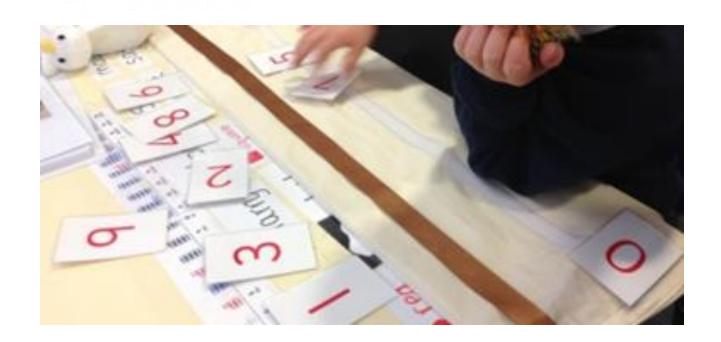


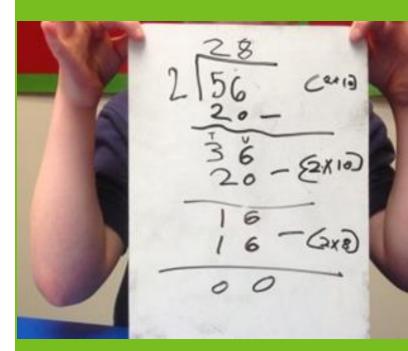


- Number lines order, place value, calculation
 - Is the line /ruler clear and big enough?
- Equipment











Tips:

- Find page numbers
- Finding out things quizzes
- In measurements
- 'How many....?' games
- Competitions, the winner (counting rewards)
- Teen words lotto/games (errors)
- Counting in 10's, 2's, 5's
- Practice worksheets some learners enjoy and has benefits
- Accurate number recognition/naming digital displays
- Calculator skills
- Can learn procedures e.g. column addition
- Teach money and time

11	12 13		14
20	Teen Lot	15	
19	18	17	16



Fill in the missing numbers

5		15	
	30	35	
45		55	
65	70		
85		95	

A Down's Syndrome Association Publication



'Learning profile' considerations summary

- Vocabulary, schedules/routines, practical daily living skills, social interest, role models
- Visual-spatial strengths
 - learning by imitation
 - often strengths/enjoyment in I.T., reading, visual arts...
 - use visual / visual- spatial supports, copy a model
- Verbal learning; speech, language & communication
- Hearing, vision, motor skills, autism....

BIG AND BOLD





2. Social inclusion and belonging

- Friendships
- Transitions prepare and support
- Our Voice, Inclusive participation
- Gains now and for the future, work, wellbeing
- Intellectual disability & individual needs





- Create conditions for all learners
 (For some learners: personalised sensory experiences e.g. poetry, stories, songs, games, musical experiences, art)
- Social interaction with peers
 - sensitive support
 - adult help can be a barrier
- Work with parents
 - Staff training (terminology)
 - Maintain communication & supports e.g. Home school link, Conversation diary
 - Know health needs (e.g. vision, hearing, sleep)





Social inclusion

- A welcome member of class and school
- Needs met within the curriculum, with adjustments
- Seating position
- Vital for social development & behaviour
 - Friendships
 - Independence









About Down's syndrome resources: Primary

Every child is unique which means they are not exactly the same as another child



How can you include your friends who have Down's syndrome?

- · Invite them into your games and activities
- · Learn some signs that they use
- · Listen well to what they say
- · Give them time to say what they want to
- Don't say the words for them

It's OK to ask your friend if they want your help

PP presentation, booklet,

guidance notes

See the link on the resources list

DSA



About Down's syndrome resources example primary

No one likes to feel left out

- What do you think being 'left out' means?
- What do think it feels like to be left out?
- How would you know if someone is feeling left out?
- What can you do to include everyone?





About Down's syndrome resources: year 6 + Secondary

Resources for Young People







Presentation

To use this presentation you will need <u>Adobe Reader</u>. Open the pdf. Go to the View menu and select Full screen mode. Click the mouse or use the arrow keys to move through the slides.

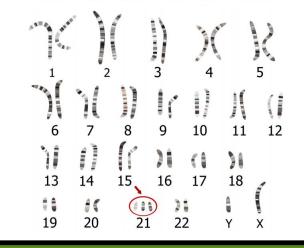
Guidance notes

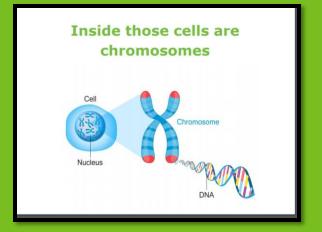
What is Down's syndrome: a resource for young people

You can download the full set of resources for schools by clicking here.



People who have Down's syndrome have an extra chromosome.



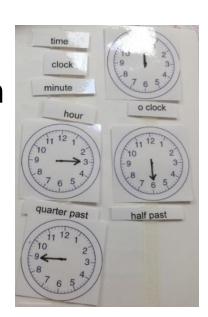




3. Examples of adaptations for inclusive teaching and learning



e.g. manipulatives, signs, aids, IT/ iPad/printer, chair, sloping desk, clean glasses, black writing pens, big & bold resources







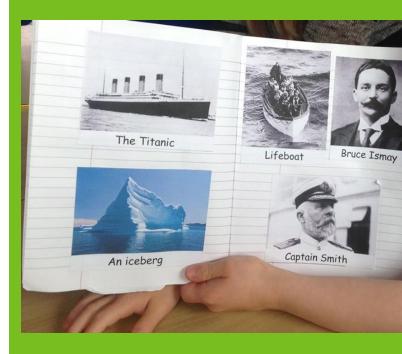




Support for whole class presentations

- Adult draws/writes on child's whiteboard
- Picture/ word cards
- Books/print from class presentation
- Listening support book
- e.g. Titanic (9 yrs)

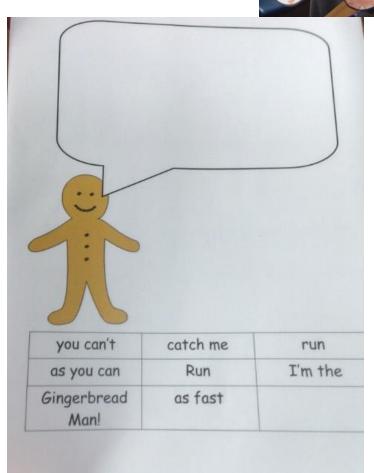


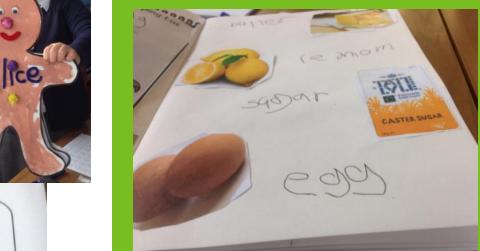


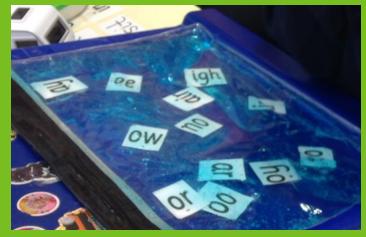


Engagement and independence



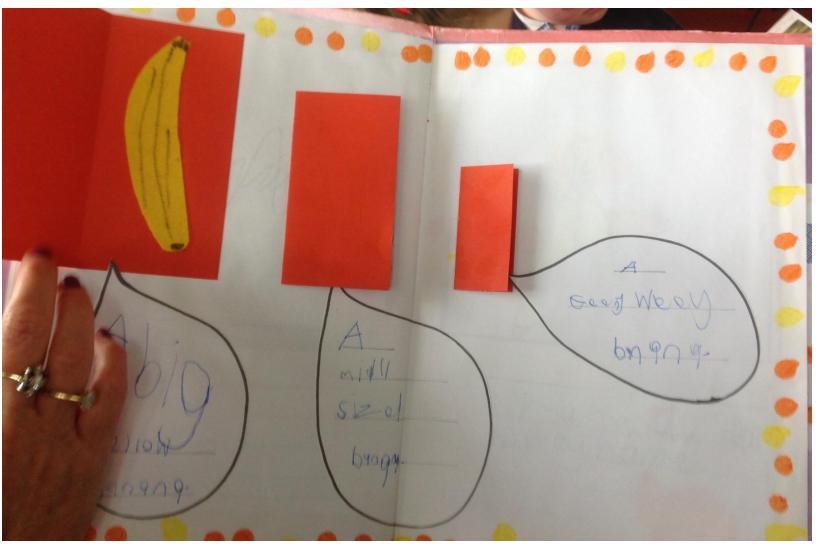


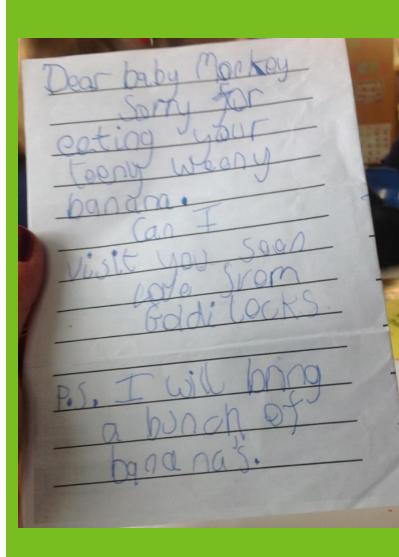






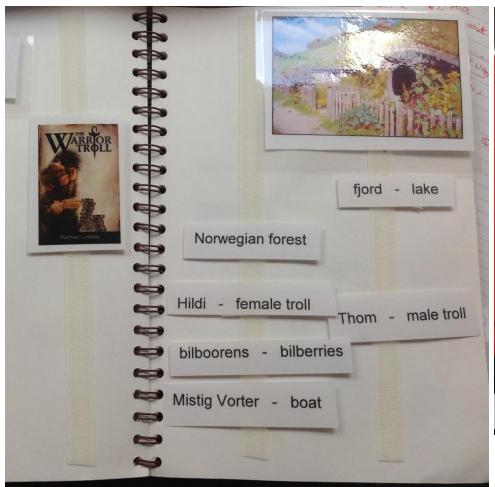








Vocabulary manipulatives





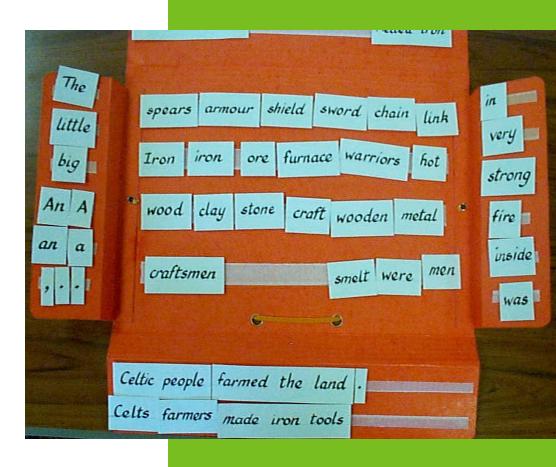




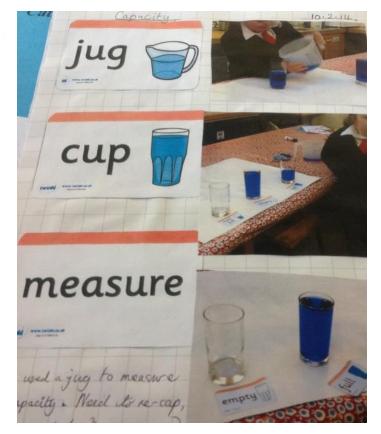


Word cards for writing

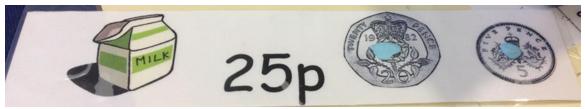


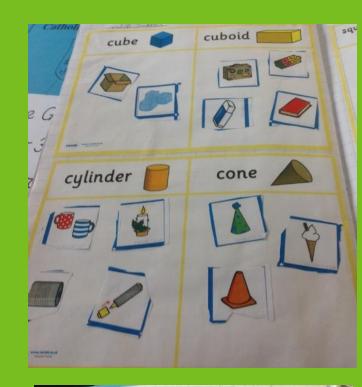


DOWN'S SYNDROME ASSOCIATION



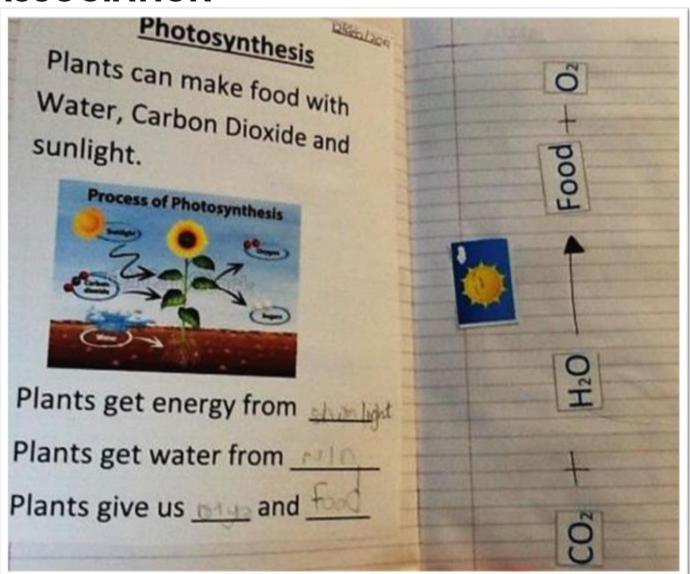










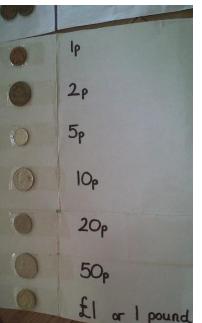




Own resources

- Numeral cards 2 sets
- Dot cards
- Number lines e.g. 10, 20, 100
- 100 square
- Ruler
- Other number equipment
- Calculator
- Coins folder





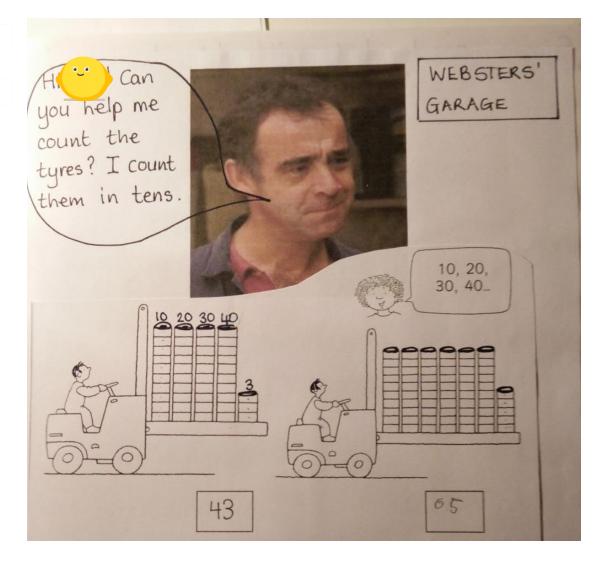


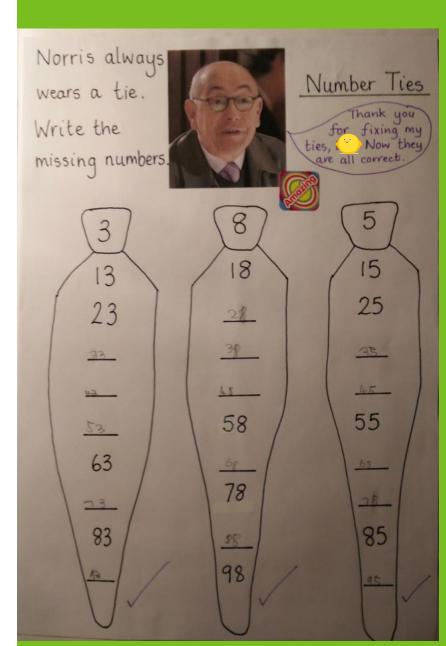






Adapt for interests





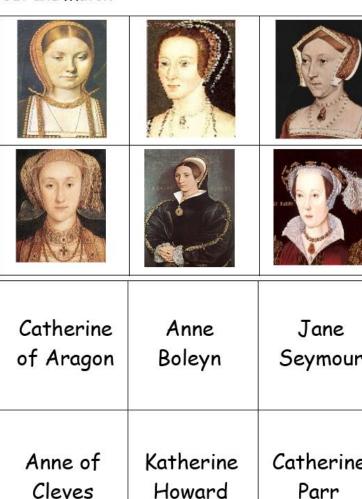


Adapt assessment

Demonstrate understanding by:

- Pointing to pictures or words
- Matching words to pictures
- Acting out role play

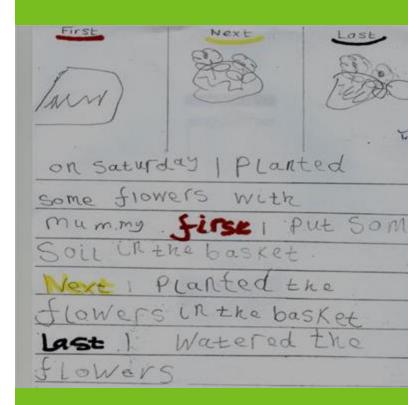
Cut and Match





Writing

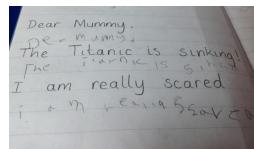
- Are topics within pupils' experience/ understanding?
- Provide visual help & alternatives record of sight vocabulary, picture cues, flash cards, post-it notes, keyword lists, writing frames
- Scribe (assistant)
- Underline or ring correct answer
- 'Cloze' procedure (fill in the gap)
- Sentence card sequences
- Cutting and sticking activities
- Computer programmes/apps



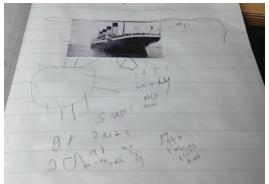


Progression

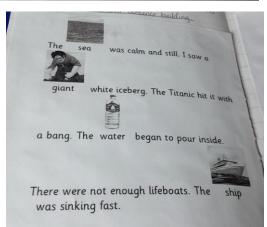
Supported copying activity



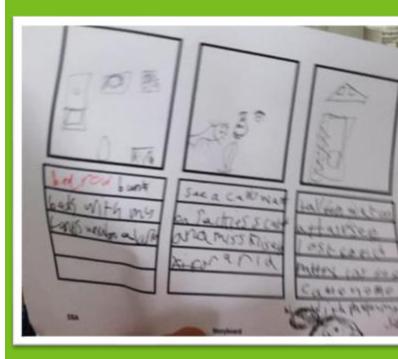
Independent writing



Supported computer activity



Independent writing, two years later





Curriculum advice

- Following a regular programme any adaptations?
- Measure success, not failure
- Encourage problem solving
- Encourage persistence
- Consider motor skills
- Cross curricular practice
- Preparation
- Working together



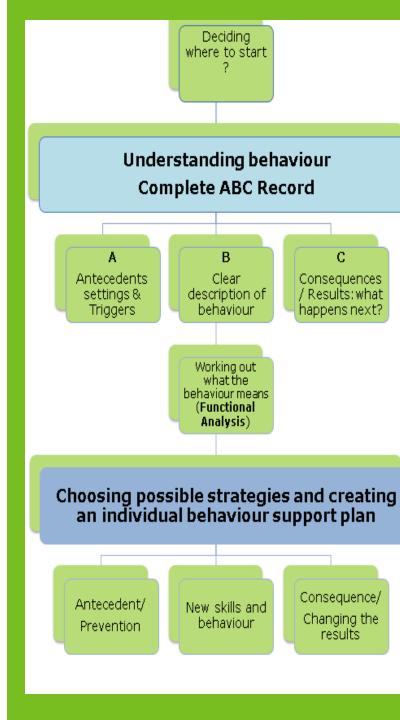


4. Supporting behaviour positively

Resources available on website Training available on website Helpline, call or email

- ABC observation record
- Functional analysis
- ABC strategies for change
- Create behaviour plans
- Review behaviour plans

https://www.downs-syndrome.org.uk/aboutdowns-syndrome/lifes-journey/understandingbehaviour/





	<u>Antecedents</u>	<u>Behaviour</u>	<u>Consequences</u>
Date Time of day	What happened just before? Contributory factors? Who? Where? What situation?	Accurate description of the behaviour How long did it last?	What did you or others do? (ignore, discuss?) How did you react? How did the person react? What happened after?



Working out the Function of Behaviour

Some of the basic functions of behaviours that challenge include:

-		
	SOCIAL ATTENTION	
	SENSORY	
	GETTING THINGS	
	ESCAPE/AVOIDANCE	Jon Jon
	EXPRESS EMOTION	

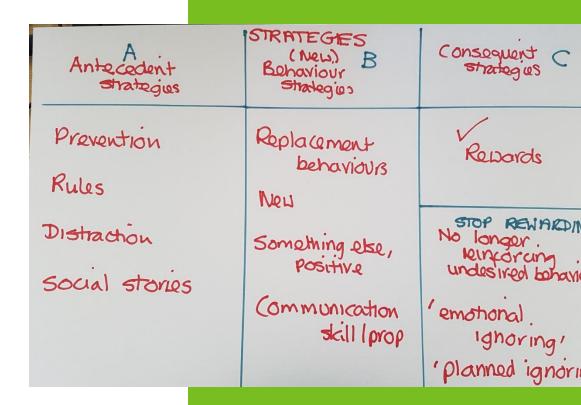


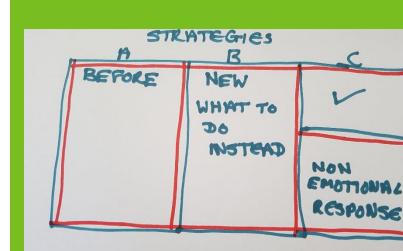
Strategies for change

Communicate with everyone to make appropriate adjustments

- Antecedent strategies
- New behaviour strategies
- Consequent strategies
 Reward
 No longer reinforce unwanted behaviours

Visual and failure free – e.g. model, pictures and photos, film, social stories/visual guides, support











From before birth to old age With you every step of the way



Early Years and Primary Education Information

December 2023

The resources that follow are to accompany the DSA Early Years and Primary Education training webinar.

The webinar can be accessed as a recording or as a live webinar with Q and A. Both the recordings and live event have a charge of £10. You can find out more about DSA training and support meetings, and book onto an event on our website.

Free information and resources

DSA Education project webpage

About Down's syndrome - Terminology guide and 'We Are ..' DSA YouTube video

DSA Our Voice

DSA 'What is Down's syndrome?' resources (primary age children)

- <u>'What is Down's syndrome?' Resource for children</u>
- <u>'What is Down's syndrome?' Presentation for teachers</u>
- Guidance notes to accompany the children's resource

Also available: <u>a set of 'What is Down's syndrome?' resources for children and young people in year 6 and above.</u>

<u>Down's Syndrome Medical Interest Group UK & Ireland (DSMIG) (2020). PCHR insert for Babies who have Down's syndrome.</u> This contains health surveillance recommendations for children and young people.

DSMIG website

DSA vision resources

<u>Maggie Woodhouse video - Visual Acuity - what is it and why does it matter to people who have Down's syndrome?</u>

Cardiff University Down's Syndrome Vision Research Unit (Dr Maggie Woodhouse and team)

DSA hearing information

DSA and Down's Syndrome Medical Interest Group UK & Ireland (2020) 'Neck instability in people who have Down's syndrome'

<u>DSA The Role of the Speech and Language Therapist for primary school aged children who have Down's syndrome (2021)</u>

DSA Speech, Language and Communication Resources

DSA Listen to Me Childhood Communication Resource

DSA Listen to Me Childhood Communication Guide

<u>Down Syndrome International (2020) 'International Guidelines for the Education of Learners with Down Syndrome'</u>

DSA 'Supporting Children to learn' written for SEN Magazine

DSA Complex Needs and Autism area of DSA website; many resources including for ADHD

<u>DSA Using Positive Behavioural Support as a model of change with people who have Down's syndrome 2022, Supporting Behaviour Positively series and other resources.</u>

DSA Education resources

DSA 'Transition from Reception to Year 1' written for SEN Magazine

DSA Visual Motor Skills foundations for writing and drawing

Other publications

Rhonda M. Faragher 2023. A Practical Guide to Educating Learners with Down Syndrome: Supporting Lifelong Learning

Lancashire and South Cumbria NHS Foundation Trust (2022) <u>'Down Syndrome Toolkit for Paediatric Speech and Language Therapists'</u>

Næss et al. (2011) '<u>Language and verbal short-term memory skills in children with Down syndrome: a meta- analytic review'</u>

Roberts, J., Chapman, R., and Warren S. (2008). 'Speech and Language Development and Intervention in Down Syndrome and Fragile X Syndrome'. Baltimore: Paul H. Brookes Publishing Co.

Routledge (2014) 'Educating Learners with Down Syndrome Research, theory and practice with children and adolescents. Edited by Rhonda Faragher & Barbara Clarke

The Emerging Down Syndrome Behavioural phenotype in Early Childhood: Implications for practice. D J Fidler, 2005, Infants and young children, 18,2, 86-103

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