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Section One-Introduction

I am going to begin with my introduction on children in the United Kingdom with Down Syndrome. Down syndrome is a genetic condition which is caused by an extra chromosome 21, which affects approximately 1 in 1000 babies which are born in the United Kingdom. Chromosome 21 is the smallest human autosome, and the links to down syndrome was first scientifically established by researchers Jerome Lejeune, Marthe Gautier, and Raymond Turpin(1959) who identified that an extra copy of the chromosome caused the condition. The Human Genome Project(2000) revealed that the chromosome contained between 200 and 300 cells, this extra genetic material disrupts the typical development of the foetus and is present in the figures of 1 in 1000 births in the United Kingdom.

John Langdon Down(1828) first discovered the syndrome which is now known as down syndrome, through a combination of meticulous clinical observation and the pioneering use of medical photography. During the years from 1858 to 1868, John Langdon Down(1828) served as a medical superintendent at the Royal Earlswood asylum. In his time of working in the asylum he began systematically measuring the physical traits of his patients, these included measurements of the diameters of the skull, palates and tongues. He also took over 200 high quality clinical photographs, he did this to be able to study his patients reoccurring facial patterns, such as the epicanthic folds as well as the flattened profiles.

The Down Syndrome Act(2022) is a UK legislation, which marks the first time a specific genetic condition has been singled out for statutory protection. This Act provides a legal duty on the secretary of state in order to issue guidance to the relevant authorities which include NHS bodies, schools and local authorities, to ensure the authorities account for the unique health, social care and educational needs that children with down syndrome should be given.

In the United Kingdom, diagnosing down syndrome in pregnancy has evolved significantly due to clinical research and the standardisation of the NHS protocols.

Since 2004, the National Institute for Health and Care Excellence(NICE) has recommended that all pregnant women be offered screening , leading to the adoption of the combined test which is the ultrasound and bloods, as the primary tools between the 10 and 14 week pregnancy term. In June 2021 , a major shift occurred in where the NHS rolled out the Non-Invasive Prenatal Testing(NIPT) as a second tier option for pregnant women who have a higher chance result. This rollout was informed by the RAPID study(2014) , which showed that the NIPT high sensitivity could significantly reduce the need for invasive diagnostic procedures such as the Chorionic Villus Sampling(CVS).

Section Two-Barriers

Moving on to barriers of children with down syndrome in the United Kingdom , which includes many barriers within the educational system. In schools throughout the United Kingdom , the ongoing crisis of school funding and specialized recruitment has created a significant barrier to the effective inclusion of children with down syndrome across the United Kingdom. Many mainstream schools face the challenges of severe staff shortages, particularly with regards to experienced Special Education Needs Coordinators(SENCOs) and trained teaching assistants who are vital for implementing a child's Education, Health and Care(EHC). For a role to become a SENCO with children with down's syndrome the requirement is a Qualified Teacher Status(QTS) and a National Professional Qualification(NPQ), which from September 2024 replaced the old National Award for SEN Coordination(2009). Without the 1-1 support within the school setting, the children may struggle to access a differentiated curriculum, which may lead to the children's quality of education being determined more by their local authority rather than their individual potential .

The secondary drop off in the United Kingdom is referred to the decline in mainstream school enrolment for children with down syndrome , which shows the figures of enrolment for primary school at 80% , and a sharp decrease at just 37% for secondary school. Recent survey data collected confirmed the primary to secondary drop off, notes that while the mainstream primary schools provide a single, supportive classroom base , secondary schools can become overwhelming due to the larger size of classes , varied class teachers and the lack of individualized attention(Fox et al.2020).

The Education, Health and Care Plan(EHC 2014) in the United Kingdom is facing crisis point , which is creating severe delays as well as severe funding deficit which in affect impacts children with down syndrome. Statutory guidelines require local authorities to issue a final EHCP within the 20 week timeframe of an assessment request , however as of January 2026 , national data shows only 46.4% of new plans were issued on the dates they were due . This leads to children with down syndrome not being given the level of support they need to be given throughout their educational journey.

The curriculum adaption gap in the United Kingdom still remains a significant barrier for children with down syndrome moving into higher key stages , in which the academic content will become increasingly abstract. Research conducted by Buckley et al(2006) highlights initially that whilst mainstream primary school often successfully differentiate their work, the gap is widened in secondary school education due to the lack of specialized , age appropriate resources. This was further evidenced by Down Syndrome UK(2023) , in which their surveys found that mainstream secondary school teachers often feel they are under equipped to adapt complex subjects such as science or history, leading to students being given work that is either too easy or being socially isolating.

Communication profile of children with down syndrome is characterized by a specific language impairment where receptive language which links with understanding , in which it significantly outpaces expressive language which links to speaking. Studies conducted by Buckley et al(2006) establishes that while children with down syndrome are often highly social,, they struggle with phonology and syntax which makes their speech difficult for unfamiliar listeners to understand. This gap acts as a major barrier for children in the United Kingdom with down syndrome in classrooms, furthermore from a study by Roberts et al(2014) highlights that poor expressive skills often lead to underestimated cognitive ability, in where the teachers mistake speech delays for the lack of intelligence. The Down Syndrome Association(2023) identifies that short term auditory memory shows as a critical hurdle , often meaning that verbal only instructions often evaporate before they can be processed . Without the consistent use of Augmentative and Alternative Communication(AAC), this profile can lead to behavioural challenges , social frustration, and academic exclusion as the child progresses into the more challenging setting of secondary school .

Section Three-Strategies

Now to move on to strategies towards Down Syndrome. Visual schedules are highly recognised as an essential evidence based practice in supporting children with down syndrome. This is primarily recognised due to the fact that they align with the populations documented strengths in being able to visually process things over auditory memory . Early research establishes that visual activity schedules(VAS) are effective , preventive interventions to be able to provide information about expected behaviours(Bryan and Gast,2000). Raver et al,(2013) studies further highlighted how using these support systems help integrate the children with down syndrome's visual and auditory processing, these specifically aim to aid speed and accuracy in performance.

Using differentiated learning for children with down syndrome is a central component for inclusive learning . This is used to ensure the pupils with down syndrome can access the same broad and balanced curriculum as their typically developed peers. Numicon(2000) was created for children with down syndrome to help with numeracy

skills as well as helping adopt a whole world technique for reading. With the Down Syndrome Act(2022), driving new statutory guides for the 2025/2026 year, the focus remains on leveraging a child's strong visual and social processing to facilitate meaningful classroom participation.

Signalong(1992) is a key-word sign supported communication system used across the United Kingdom to support children with down syndrome by working on strengthening their visual learning. Unlike British Sign Language(BSL) which is a distinct language with its own grammar, Signalong(1992) is designed to be used around spoken English . The signs used are followed from the users spoken word order. Using this approach provides a visual bridge that reduces the frustration caused by speech delays, and it also helps anchor abstract words into a physical form. Most local authorities will offer training for sign along for free or may offer in house training sessions. The signalong(1992) website offers resources and a selection of free sign descriptions and videos .

The Down Syndrome Act(2022) supports children in the United Kingdom by establishing clear statutory guidance that requires local authorities and health boards to be able to provide and recognise the specific learning and communication profiles of children with downs syndrome. The act also emphasizes early support and seamless transitions to adulthood. Legally obliging authorities to provide support from health, education and care sector.

Section Four-Conclusion

From the research conducted the support for children with down syndrome in the United Kingdom is entering a transformative phase for 2026. the full implementation of the Down Syndrome Act(2022) statutory guidance ensures that health and education authorities now have a due regard to the unique learning profiles of these pupils. The NHS has also become more advanced with early diagnosis in pregnancy for down syndrome , using a less invasive method making women feel more confident in being tested. From doing research on down syndrome I feel confident that i have not only learnt about the disability but have also seen what support they are given and what support is needed to extend to ensure they have the best possible educational journey. This quote from Professor Vesna Stojnavik(2018) words children with down syndrome learn and develop skills in different ways, but given the right learning environment their language development improves , which is a strong relevant quote to aid pupils with down syndromes educational development as well as ensuring they have the same quality of education.

Section Five-References

Buckley, S. (2004). Creative approaches to teaching and to differentiation. *Down Syndrome News and Update*, pp.1–1. (Accessed 10th May 2026).

Council for Disabled Children (2023). *What is an Education Health and Care Plan?* [online] Council for Disabled Children. Available at: <https://councilfordisabledchildren.org.uk/about-us-0/networks/information-advice-and-support-programme/useful-resources-publications/what-2>. (Accessed 14th May 2026).

Cuckle, P. (1999). Getting in and staying there: Children with Down syndrome in mainstream schools. *Down Syndrome Research and Practice*, pp.95–99. (Accessed 14th May 2026).

Department for Education (2024). *Transition to national professional qualification for special educational needs co-ordinators.* [online] GOV.UK. Available at: <https://www.gov.uk/government/publications/mandatory-qualification-for-sencos/transition-to-national-professional-qualification-for-special-educational-needs-co-ordinators>. (Accessed 10th May 2026).

Department for Education (2026). *Specialist SEND support in every school and community.* [online] GOV.UK. Available at: <https://www.gov.uk/government/news/specialist-send-support-in-every-school-and-community>. (Accessed 10th May 2026).

Department for Education (2025). *Special educational needs in England, Academic year 2024/25.* [online] Service.gov.uk. Available at: <https://explore-education-statistics.service.gov.uk/find-statistics/special-educational-needs-in-england/2024-25>. (Accessed 14th May 2026).

Down Syndrome UK. (2025). *Secondary Education Programme for Children with Down Syndrome.* [online] Available at: <https://downsyndromeuk.co.uk/secondary-education-programme/>. (Accessed 10th May 2026).

Down Syndrome(N.D) *Support in the Early Years and Beyond*. Available at: <https://www.royalgreenwich.gov.uk/sites/default/files/2025-09/Down%20Syndrome%20support%20in%20the%20early%20years%20and%20beyond.pdf>. (Accessed 14th May 2026).

Down Syndrome Resource Foundation. (2022). *AAC - Down Syndrome Resource Foundation*. [online] Available at: <https://dsrf.org/resources/information/communication/aac/>. (Accessed 10th May 2026).

Downs Syndrome Association. (2024). *Inclusive curriculum - Downs Syndrome Association*. [online] Available at: <https://www.downs-syndrome.org.uk/about-downs-syndrome/lifes-journey/children-families-and-education/inclusive-curriculum/>. (Accessed 10th May 2026).

DSActive. (n.d.). *DSActive*. Available at: <https://www.dsactive.org.uk/>. (Accessed 14th May 2026).

Health (2025). *Down Syndrome Act 2022 draft statutory guidance - consultation document*. [online] GOV.UK. Available at: <https://www.gov.uk/government/consultations/down-syndrome-act-2022-draft-statutory-guidance/down-syndrome-act-2022-draft-statutory-guidance-consultation-document>. (Accessed 10th May 2026).

GOV.UK (2025). *Education, health and care plans, Reporting year 2025*. [online] Service.gov.uk. Available at: <https://explore-education-statistics.service.gov.uk/find-statistics/education-health-and-care-plans/2025>. (Accessed 10th May 2026).

Hughes, J. (2019). Inclusive education for individuals with Down syndrome. *Down Syndrome News and Update*, [online] 6(1), pp.1–3. doi: <https://doi.org/10.3104/practice.370>. (Accessed 10th May 2026).

Jerome Lejeune.(N.D). *The Lejeune Clinic*. Available at: <https://www.lejeuneclinic.com/about-us/jerome-lejeune>. (Accessed 10th May 2026).

Lightfoot, L. and Bond, C. (2013). An exploration of primary to secondary school transition planning for children with Down's syndrome. *Educational Psychology in Practice*.(Accessed 10th May 2026).

London (2023). *Down Syndrome - Support in Education – London Borough of Bromley*. [online] London Borough of Bromley. Available at: <https://www.bromley.gov.uk/special-educational-needs-disability-send-local-offer/syndrome-support-education>. (Accessed 10th May 2026).

Morris, J.K. and Alberman, E. (2009). *Trends in Down's syndrome live births and antenatal diagnoses in England and Wales from 1989 to 2008: analysis of data*

from the National Down Syndrome Cytogenetic Register. (Accessed 14th May 2026).

National Award for SEN Coordination Qualification Specification.

(n.d.). Available at:

[HTTPS://www.bestpracticenet.co.uk/Media/Documents/NASENCO/NASENCO%20Qualification%20Specification_web-mar21.pdf](https://www.bestpracticenet.co.uk/Media/Documents/NASENCO/NASENCO%20Qualification%20Specification_web-mar21.pdf). (Accessed 10th May 2026).

National Human Genome Research Institute (2020). *The Human Genome Project.*

[online] National Human Genome Research Institute. Available at:

<https://www.genome.gov/human-genome-project>. (Accessed 10th May 2026).

NHS (2023). *Down's Syndrome.* [online] NHS. Available at:

<https://www.nhs.uk/conditions/downs-syndrome/>. (Accessed 10th May 2026).

NHS (2021). *Screening for Down's syndrome, Edwards' Syndrome and Patau's Syndrome.*

[online] nhs.uk. Available at: <https://www.nhs.uk/pregnancy/your-pregnancy-care/screening-for-downs-edwards-pataus-syndrome/>. (Accessed 10th May 2026).

Public Health England (2021). *Down's syndrome, Edwards' syndrome and Patau's syndrome: combined or quadruple test taken on or after 1 June 2021.*

[online] GOV.UK. Available at: <https://www.gov.uk/government/publications/screening-tests-for-you-and-your-baby/downs-syndrome-edwards-syndrome-and-pataus-syndrome-combined-or-quadruple-test-taken-on-or-after-1-june-2021>. (Accessed 10th May 2026).

Reading.ac.uk. (2018). *Giving children with Down Syndrome the tools they need to learn.*

[online] Available at: <https://archive.reading.ac.uk/news-events/2018/September/pr776499.html>. (Accessed 10th May 2026).

Roberts, J.E., Price, J. and Malkin, C. (2007). Language and communication development in down syndrome. *Mental Retardation and Developmental Disabilities Research Reviews*. (Accessed 10th May 2026).

Signalong (N.D). *The Communication Charity. Home.* [online] Available at:

<https://signalong.org.uk/>. (Accessed 10th May 2026).

The Editors of Encyclopaedia Britannica (2019). Down syndrome | Definition, Types, Symptoms, Diagnosis, & Life Expectancy. In: *Encyclopedia Britannica.*

[online] Available at: <https://www.britannica.com/science/Down-syndrome>. (Accessed 14th May 2026).

Tuck, K.N., Chow, J.C., Kim, G.Y., Malone, E.J. and Smith, K.H. (2024).

Implementing Visual Activity Schedules to Support Elementary Student Engagement. Beyond Behaviour. (Accessed 10th May 2026).

Ward, O.C. (1999). John Langdon Down: The Man and the Message. *Down Syndrome Research and Practice*. (Accessed 10th May 2026).

Wilkinson, K.M. and McIlvane, W.J. (2013). Perceptual Factors Influence Visual Search for Meaningful Symbols in Individuals With Intellectual Disabilities and Down Syndrome or Autism Spectrum Disorders. (Accessed 10th May 2026).