

Supporting Children with Additional Learning Needs

I acknowledge the use of ChatGPT (2026). Available at: <https://chatgpt.com/> on 11 May 2026 to generate images to support my poster presentation.

I used the prompt(s):

1. Prompt: Create an infographic for an academic poster on Down syndrome in Wales, using the following data: 1,556 cases recorded over 20 years, 78 cases identified per year on average, 23.3 per 10,000 total births, 46% of cases liveborn, and approximately 36 babies born live with Down syndrome each year in Wales. The infographic should be visually attractive, academically appropriate, and suitable for an early year's presentation poster. Data source: Public Health Wales, CARIS Review 2018, data from 1998 to 2017.

2. Prompt: Create a clean infographic titled "Examples of Visual Supports in Early Years Settings" with a green heading and six simple labelled boxes showing visual timetables, now and next boards, objects of reference, visual labels, choice boards, and step-by-step sequences. Use a child-friendly, classroom-style design with soft colours, clear illustrations, and suitable for an early year's presentation poster.

3. Prompt: Create a warm, realistic image of a young child with Down syndrome in an early years classroom, smiling while engaging in an activity. The setting should look bright, welcoming and educational, with shelves and soft classroom details in the background. The image should feel positive, with soft colours, clear illustrations, and be suitable for an early years' presentation poster.

I have also used generative Artificial Intelligence (AI) in this work, Grammarly (2026) to assist grammatically, and Google Translate (2026) to support this work as an English as a Second Language.

I confirm that I have copies of my drafts, notes, and other resources I used before and after the use of AI tools, which I may be asked to provide as evidence.

Script:**Can I just confirm everyone is seeing my poster?**

Good evening, everyone. My name is Cristiane de Freitas, and today I will be presenting my poster on Down syndrome in the early years.

First, I would like to draw your attention to the image next to the introduction section, which shows a child with Down syndrome. I included it as a visual point of reference for the condition. However, it is important to remember that no single image can represent every child. With that in mind, I will now begin by introducing the condition and the focus of my poster.

Down syndrome is a lifelong condition that occurs when a person is born with an extra copy of chromosome 21, as explained by the National Down Syndrome Society in 2024. NHS Inform, also in 2024, states that around one in every 700 babies born in the United Kingdom has Down syndrome. However, in my poster, I argue that what matters most is not the diagnosis itself, but the response that follows. Drawing on Soccorso and colleagues, in 2024, I suggest that provision should be timely, individualised, and shaped around the child, which reflects the principles set out in the Additional Learning Needs Code for Wales, published in 2021. My poster has three main aims. First, I evaluate how Down syndrome is identified and diagnosed. Second, I analyse two barriers through the medical and social models. Third, I explore visual supports as a strategy.

I will begin with identification and diagnosis.

Down syndrome may be identified either before or after birth, as Bull explains in 2020. According to the NHS, in 2025, prenatal screening usually involves the combined test, which includes a maternal blood test and an ultrasound scan in early pregnancy. A higher-chance result does not confirm a diagnosis, and Public Health England, in 2021, notes that further invasive testing, such as chorionic villus sampling, may then be offered. Van Schendel and colleagues, in 2017, highlight that this can be a difficult stage for families, as decisions may need to be made before the information is fully conclusive. Some families also decline screening, and Ternby and colleagues, in 2024, found that these decisions are often shaped by personal values and attitudes towards disability. Thomas, in 2017, further argues that routine screening may reflect implicit assumptions about the value of disabled lives, raising ethical questions about how disability is understood and how families are supported in making decisions. Nevertheless, early identification may still be beneficial because it can give families earlier access to information and support, and in Wales, it may also help to initiate the Individual Development Plan process under the Additional Learning Needs and Education Tribunal (Wales) Act 2018. Windsperger and Hoehl, in 2021, caution that developmental outcomes vary considerably. This means that diagnosis alone cannot determine a child's future needs, and the key challenge for practitioners is to ensure that support responds to the individual child rather than to the label alone.

Before I move to the barriers section, the image on the right helps place Down syndrome in the Welsh context. Public Health Wales reported in 2018 that around 36 babies are born with Down syndrome in Wales each year, which shows why this topic is particularly relevant in Wales.

The first barrier I will discuss is hypotonia, or reduced muscle tone, which Bull, in 2020, identifies as a characteristic feature of Down syndrome. Marchal and colleagues, in 2016, and Dicieri-Pereira and colleagues, in 2022, explain that it can delay motor development and affect balance, fine motor skills, and the coordination needed for feeding and speech. Through the medical model, these difficulties are often understood as impairments within the child and are commonly addressed through interventions such as physiotherapy and occupational therapy, as noted by Antonarakis and colleagues, in 2020, and Bull and colleagues, in 2022. However, drawing on Guevara, in 2021, I would argue that viewing hypotonia mainly as an individual deficit risks treating reduced participation as inevitable. In early years settings, hypotonia may reduce children's opportunities for physical play because it can make movement, balance, and coordination more difficult. As a result, the child may tire more easily, develop motor skills more slowly, and find it harder to join shared activities. This matters because the Curriculum for Wales, published in 2020, places strong emphasis on these experiences, yet they may be less accessible to a child with hypotonia without inclusive support. This is where inclusive practice becomes particularly important. As the Down Syndrome Association suggests in 2022, practitioners can reduce the impact of hypotonia through pedagogical adjustments, such as breaking activities into smaller steps, giving children more time, and adapting tasks to support participation.

The second barrier is the absence of augmentative and alternative communication, or AAC, which Barbosa and colleagues, in 2018, describe as methods used to support or replace spoken communication, such as picture symbols, signs, or communication boards. Smith, Næss and Jarrold, in 2017, note that children with Down syndrome often show relative strengths in visual and receptive communication, alongside greater difficulty with expressive verbal language. In early years settings, this may make it harder for children to express needs, manage transitions, and interact with others when communication depends mainly on spoken instruction, as suggested by Therrien, Light and Pope, in 2016. Drawing on Beukelman and Light, in 2020, I would argue through the social model that this should not be seen simply as a difficulty within the child, but as a consequence of environments that fail to provide accessible, multimodal communication. This is consistent with the principles of the Additional Learning Needs Code, published in 2021, especially its emphasis on person-centred practice and children's active participation. Where communication is not accessible, that principle may be undermined, because a child who cannot express a choice, ask for help, or follow a transition may be excluded by the environment rather than by ability alone. However, McFadden and colleagues, in 2017, caution that AAC alone does not guarantee inclusion, as its value depends on informed implementation. In practice, this requires practitioners to embed AAC meaningfully within everyday interaction and routines, so that children can use it to express choices, seek support, and participate more fully, a point also supported by Cologon and Mevawalla, in 2018.

Having considered two barriers, I now turn to my chosen strategy: visual supports.

As shown in the image on the left, they can take different forms in practice, including visual timetables and now-and-next boards. Down Syndrome International, in 2020, Boundy and colleagues, in 2023, and Baxter, in 2025, all recommend their use because they can help children understand what is happening, what will happen next, and how to make themselves understood. Drawing on Vygotsky's theory from 1978, visual supports can act as a form of scaffolding by helping children complete tasks more independently over time. For example, a sequence of picture symbols showing the steps of putting on a coat may support a child through dressing until less adult guidance is needed. At the same time, Channell and colleagues, in 2021, remind us that profiles vary considerably, so support must be tailored to the individual child, as some children may respond better to pictures than to spoken instructions. This is also consistent with the person-centred principles of the Additional Learning Needs Code, published by the Welsh Government in 2021, which emphasise that support should be shaped around the individual child.

However, I would stress that visual supports do not become effective simply by being present in the setting. Soccorso and colleagues, in 2024, suggest that their value may be reduced when they are introduced as a routine response to diagnosis rather than selected in relation to the child's individual needs. Family collaboration is also important here, as researchers by Ryan and Quinlan, in 2018, Kendall, in 2019, and Scarparolo, in 2025, indicate that practitioners are more likely to use visual supports appropriately when they draw on parents' understanding of how their child communicates. Similarly, Ronski and colleagues, in 2023, indicate that parent-led communication may support routines, transitions, and expressive language, although they also describe this evidence as exploratory, which means it should be viewed as promising rather than definitive. O'Leary, Lyons, and Frizelle, in 2025, further show that successful use depends on factors such as practitioners' training, time, and whole-setting commitment, suggesting that the impact of visual supports is shaped not only by the strategy itself but also by the setting's capacity to implement it effectively.

Finally, drawing on Goodley, in 2017, I would warn that visual supports may become restrictive if they are used too rigidly or in place of relational interaction. For example, if a child is expected to follow visual cues throughout the day, with little room for spontaneous interaction or child-led choice, the support may begin to structure the child's experience too tightly. Therefore, visual supports can be valuable, but only when they are used flexibly and within warm, responsive relationships.

To conclude, my poster argues that the key issue in early years practice is not the diagnosis itself, but whether provision is sufficiently individualised, inclusive, and responsive to reduce barriers to participation for children with Down syndrome.

Thank you for listening. I am now happy to take any questions.

Questions:

1 - Some children with Down syndrome are also diagnosed with autism. Why might this dual diagnosis be missed, and what does it mean for early years practice?

Answer:

That is a very important point. According to the National Down Syndrome Society (2026), around 16 to 18% of children with Down syndrome also have autism, which is much higher than in the general population. However, this dual diagnosis can sometimes be overlooked, for example, if a child shows very limited eye contact, rarely responds to their name, or displays repetitive behaviours, practitioners may need to consider whether autism could also be present. A study by Diniz and colleagues found in 2022 that when such signs are interpreted only through Down syndrome, autism may not be recognised early enough, and the support provided may not fully reflect the child's actual needs. This links directly to the main argument of my poster, which is that effective provision should respond to the individual child, rather than to the diagnostic label alone.

2 - You mention that visual supports depend on staff training and time to be effective. But in many early years settings, both are limited. How realistic is it to expect practitioners to use these strategies well?

Answer:

That is a fair challenge. I would say that visual supports are realistic only when settings introduce them in a manageable way. Research by Bills and Mills, in 2020, shows that staff confidence influences how effectively these strategies are used. For example, a practitioner might begin with one simple support during one specific routine, such as using a visual timetable to help children move from free play to group time, rather than trying to introduce a full visual system at once. Used consistently, this can help the child become more familiar with the routine over time. I would also see this as a leadership issue. The OECD, in 2025, stresses that inclusion depends on organisational conditions such as training and workforce capacity. So, if those conditions are limited, this needs to be addressed at a whole-setting level.

ASK KAITILIN A SECOND QUESTION:

Can you give me another example on how autism can be different from one child to another?

ASK AMIRA A SECOND QUESTION:

Imagine a school where dyslexia support is excellent. What would the classroom and teaching look like?

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Source: OpenAI ChatGPT (2026a) *Examples of Visual Supports in Early Years Settings* [AI-generated image]. ChatGPT response to Cristiane de Freitas, 11 May.

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