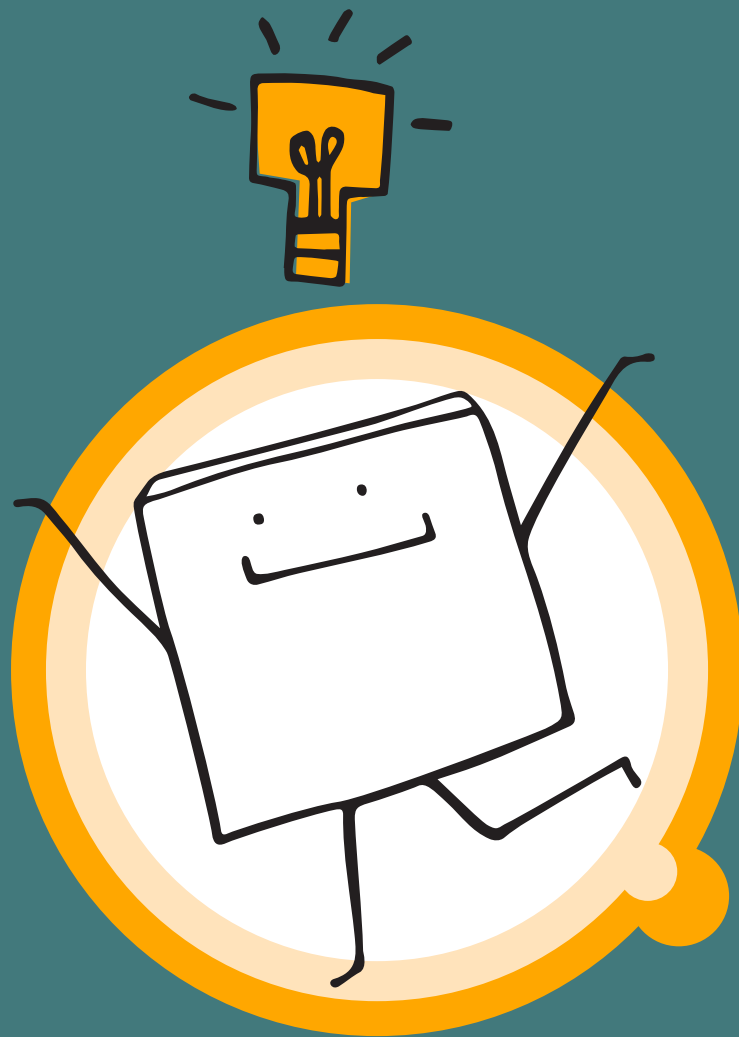# Understanding the Strengths and Difficulties of Dyspraxia/DCD:
A guide for teachers

**Edinburgh Psychoeducation Intervention
for Children and Young People© (EPIC)**

THE UNIVERSITY *of* EDINBURGH

EPIC

Edinburgh Psychoeducation
Intervention for Children

EPIC Booklets

There are two types of EPIC booklets:
1) The **EPIC Strengths and Difficulties** booklets.
2) The **EPIC Strategy** booklet.

This is the **EPIC Strengths and Difficulties** booklet
for **Dyspraxia/DCD**

If you would like to read more about strategies for developing skills and managing difficulties see the **EPIC Strategy** booklet.
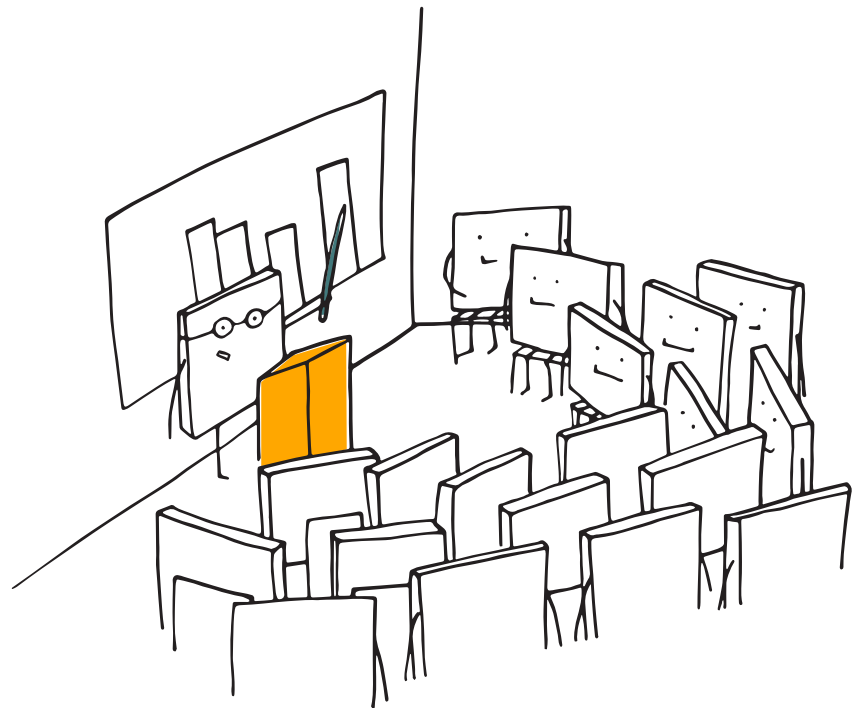
Who is this booklet relevant for?

We hope this guide will help you to further understand children with DCD and give you some more ideas of how to support them in school.

While this booklet was made with children with DCD in mind, the difficulties described are often relevant to:

1. A child struggling with one of the difficulties described.

2. A child with another diagnosis such as autism, ADHD, dyslexia, dyscalculia or children born prematurely.

3. The ideas described in this booklet are mainly applicable to children up to the end of primary school but are relevant for adolescents as well.

4. Understanding the concepts in this booklet can benefit the whole class by maintaining a positive learning environment and supporting every child to access the curriculum.

Understanding Dyspraxia/DCD

Developmental Coordination Disorder (DCD), also known as Dyspraxia, is common.

- Everyone with DCD is different but generally it impacts fine motor skills (e.g. holding a pencil) and/or gross motor skills (e.g. riding a bicycle). It can also impact the ability to organise yourself, remember information and control actions.

- Children with DCD often show sensory processing differences. They may be sensory avoidant e.g. leaving a room when noises are too loud for them. Or they may be sensory seeking and seek more sensory stimulation e.g. using a fidget spinner. A lot of children have a combination of both.

- Children with DCD often show some co-occurring ADHD symptoms and can also be hyperactive and impulsive. For children who are hyperactive it is often the first thing that we see because the behaviour is so visible. It is important to look past this external behaviour and focus on the thinking difficulties.
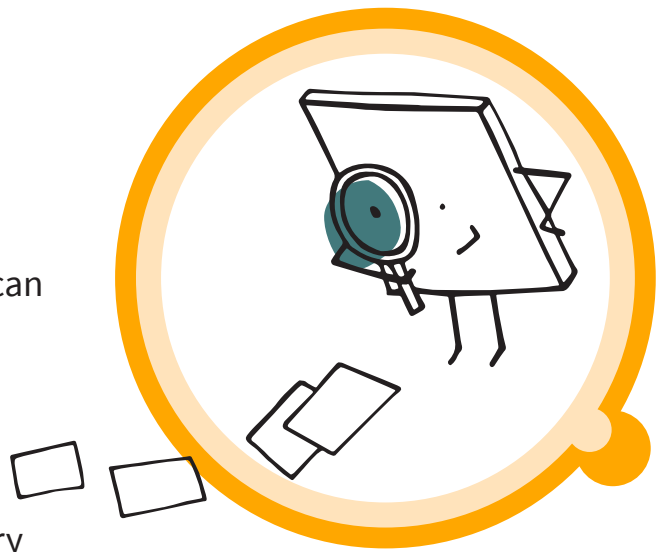
DCD facts

Children with DCD can have a range of motor skill difficulties.
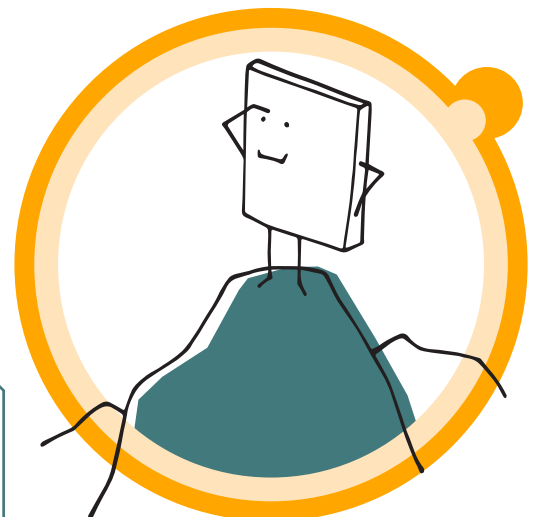
Balance

Coordination

Motor planning

Children with DCD often have other difficulties additional to their motor skill difficulties. See the next page for examples.

Most people are diagnosed in childhood and difficulties persist into adulthood

But there are things that can help children manage their difficulties

Understanding DCD

All children with DCD are different, but they may have a range of difficulties beyond their motor skill difficulties.

Planning ahead

Staying focused

Following instructions

Sitting still for a long time

Keeping track of the time

Thinking before they speak

Processing emotions

Thinking flexibly
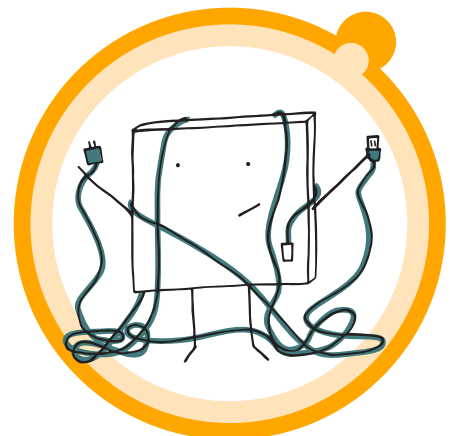
Remembering to use a strategy

Starting or finishing a task

Waiting their turn

Moving from one task to another

Remembering things

Making friends

Understanding DCD

Children with DCD can also have lots of different strengths. It is important to think of a child with DCD in relation to areas of strengths as well as their areas of difficulty.

Fun to be around

Strong sense of justice
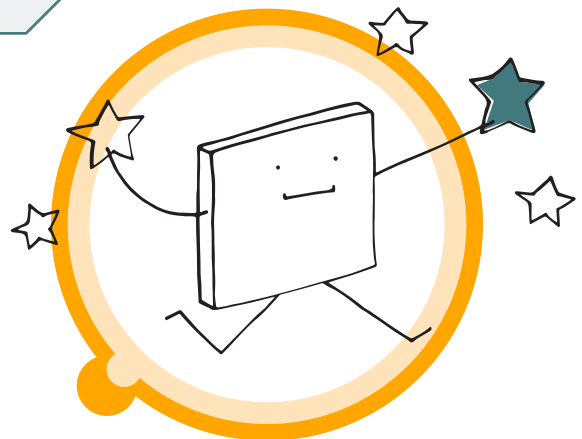
Enthusiastic

Motivating others

Creative

Making quick decisions

Taking risks

Sociable

Thinking outside the box

Kind and generous

Thinking and Learning

Some of the difficulties listed on page **6** are caused by underlying processes in the brain called **"executive functions"**.

Many children with DCD show executive function difficulties but may differ from one another in areas they have difficulty with.

For example, some may have a difficulty controlling their attention while others are impacted by difficulties in memory or planning. It is important to identify which areas are underlying the child's difficulty with learning.
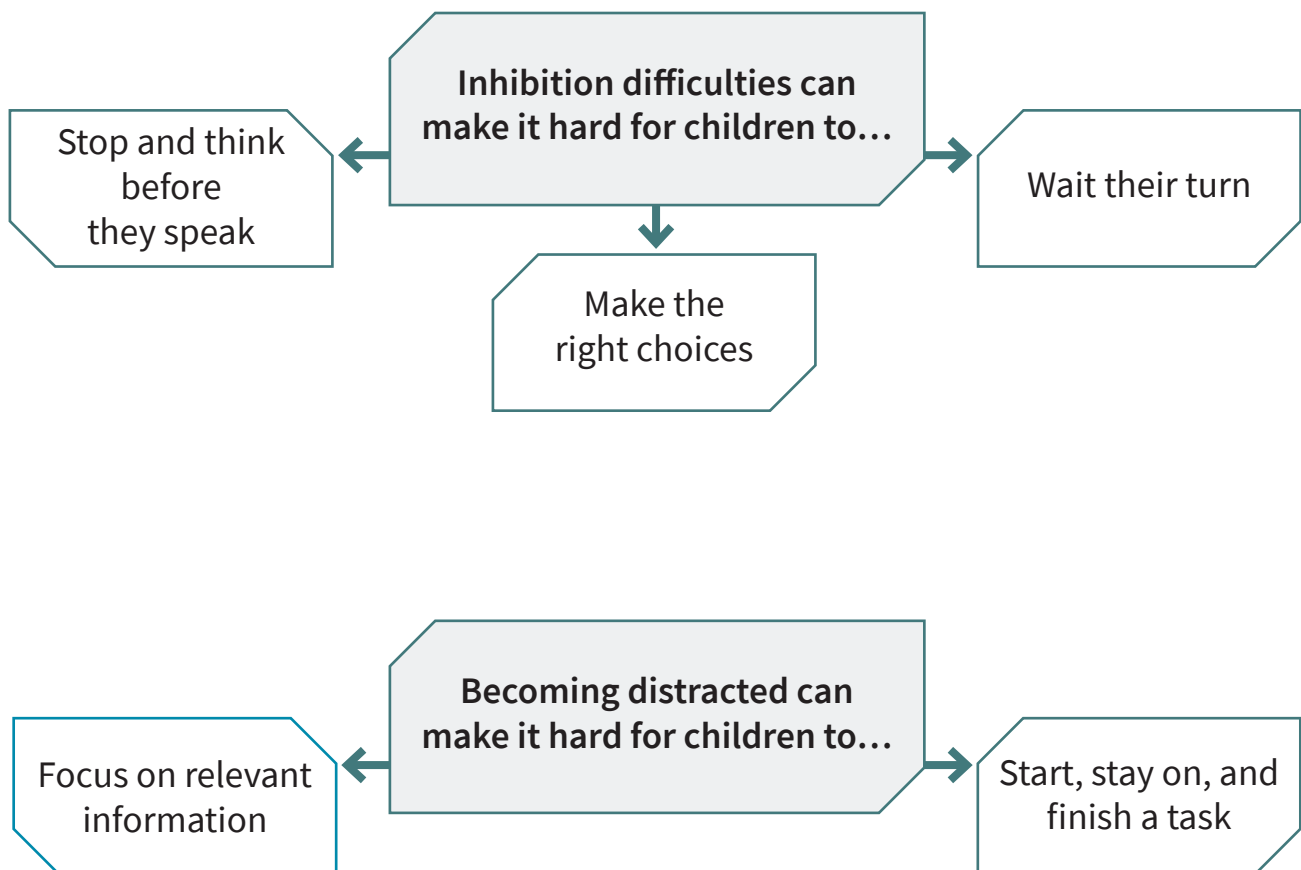
Executive functions:

- **Inhibition**
- **Attention**
- **Working memory**
- **Planning**
- **Self-regulation**
- **Emotional well-being**

Inhibition

Difficulty with avoiding distractors and generally controlling responses are sometime features seen in children with DCD.

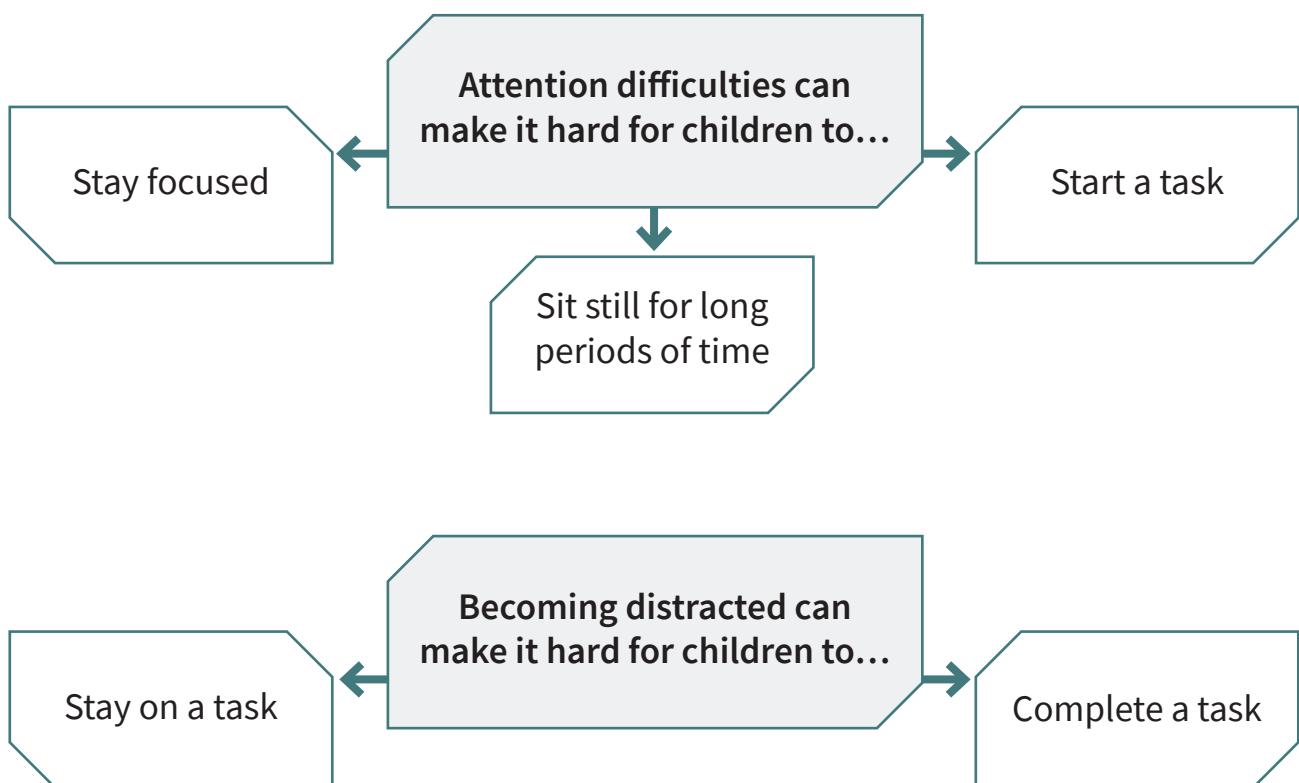**Inhibition difficulties can make it hard for children to…**

Stop and think before they speak

Wait their turn

Make the right choices

Becoming distracted can make it hard for children to…

Focus on relevant information

Start, stay on, and finish a task

See pages **10-11**, **36**, and **39** in the **EPIC Strategy** booklet for strategies to help with inhibition control.

Attention

Attention difficulties are a common feature of DCD.

	Attention difficulties can make it hard for children to…	
Stay focused		Start a task
	Sit still for long periods of time	

	Becoming distracted can make it hard for children to…	
Stay on a task		Complete a task

Important Note:
Not all children with DCD have an 'attention' problem but other executive function difficulties can look like poor attention e.g. sometimes a child seems like they are not paying attention but actually the issue is working memory.

See pages **12-16**, and **36** in the **EPIC Strategy** booklet for strategies to help with attention.

Working memory

Working memory (sometimes called short-term memory) is the mental workspace where you hold and organise information for a brief time.

What does poor working memory look like?

Often we have to hold multiple items in our mind at a time. For some children there is **limited space** to hold all of the information. They may only remember the first or last part of an instruction if it has multiple parts.

Information may **disappear more quickly** from memory unless rehearsed or aided with another strategy. Many have a difficulty **organising information in memory** or if asked to reverse the order of information in memory such as in some maths problems e.g. reversing a multiplication sum to divide it.

These difficulties can make it hard to:

- **Follow instructions**
- **Complete sums in the mind**
- **Follow a story**

Having poor working memory can therefore impact on lots of different aspects of life.

It is particularly important strategies are in place to support children with poor working memory in school.

See pages **25-32**, **37**, and **40** in the **EPIC Strategy** booklet for strategies to help with working memory and long-term memory.

Planning

The ability to plan ahead is important for lots of different actions and activities at school.

Planning is important for:

- **Starting and completing a task**
- **Time management**
- **Setting goals**

Children who are impulsive often also find it hard to **stop and think** about what they are going to do or say in advance.

This can make it difficult to get started on a task, or finish a task because they haven't thought about the steps they need to take to achieve this. Planning is important at the end of the task not just the beginning.

Children with DCD are often less likely to check their work and reminding them to plan can help it become more routine.

Remembering to use a strategy

Using a strategy to help complete a task is usually an automatic behaviour for children. Children with DCD often do not think of using a strategy.

Strategy use is important for:

- **Accuracy and speed in completing a task**
- **Remembering all relevant information or steps**

In our strategy booklet we outline a wide range of internal thinking strategies e.g. rehearsal and using mental imagery. We also detail useful external resources e.g. mind-maps and diaries that can be used to support learning.

Regularly reminding the child at the start of a task to use a strategy will help them to use strategies more routinely. They may also need help practising how to identify the right strategy for different task demands.

Self-regulation

Self-regulation is about being able to **recognise and monitor** task demands and to respond appropriately and flexibly.

Self-regulation requires:

- **Stopping and Thinking**
- **Planning your Response**
- **Monitoring of Progress**

If a child cannot alter their responses to the demands of a task they may perform it too quickly, affecting their accuracy. Alternatively, they may complete the task more slowly without any added benefit and negatively impact time management.

If the child also has ADHD they may take stimulant medication which improves self-regulation. There are also strategies that can be used to encourage the child to regulate to task demands and to their environment.

See our website for more information on medication.

See pages **17**-**19** in the **EPIC Strategy** booklet for strategies to help with self-regulation.

Emotional well-being

Emotional-regulation involves being able to **recognise and monitor** what you are **thinking**, **feeling** or how you are **acting**. Children with DCD often don't 'Stop and Think' about how they are feeling before responding.

To facilitate good emotional regulation the child should be encouraged to:

- **Be aware of their reactions to the environment**
- **Monitor their responses**
- **Self-reflect**

If a child cannot recognise what they are thinking or feeling, this can impact on how they behave. This can lead to **frustration** as they may not fully understand why they acted the way that they did.

A child may benefit from **sensory or movement breaks** to give them **time to reflect** on how they are feeling.

Supporting children with DCD
in the classroom

There are many strategies that can be used that may help children with DCD.

They may work for some children but not others so it is important to first understand what the child's individual difficulties are.

You can use the previous pages to identify what difficulties your child might have and then try some of the strategies in the **EPIC Strategy** booklet that target those skills.
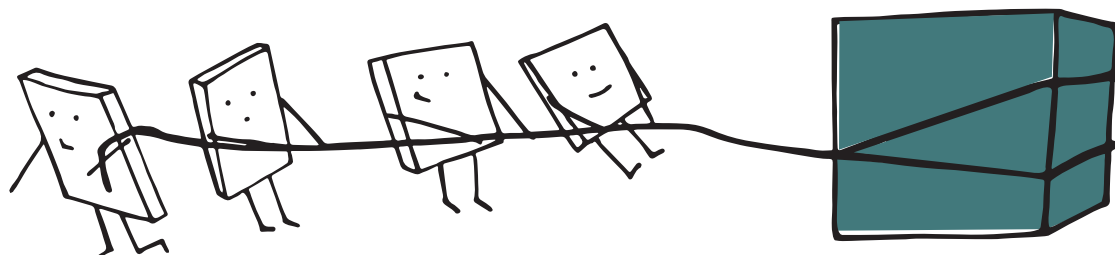
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A guide for teachers

EPIC is co-produced with children, young people, parents, clinicians, and educational professionals.

This work has been funded by the Waterloo Foundation and a Wellcome Trust Institutional Translation Partnership Award.

thewaterloofoundation*

We hope this guide has been useful in giving you some ideas of how to help a child with their strengths and difficulties.

We very much welcome feedback on our resources: please contact Dr. Sinead Rhodes at **sinead.rhodes@ed.ac.uk** with any comments.

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