UNDERSTANDING
EXECUTIVE FUNCTIONING & ADHD

A staff factsheet from Outside the Box Education

Executive functioning is the brain's management system — the set of mental skills that allow us to plan, organise, initiate and regulate our behaviour and emotions. Think of it as the CEO of the brain, sitting in the prefrontal cortex, coordinating everything else.

For most people this works quietly in the background. For people with ADHD, this system is significantly under-developed — not because of laziness or attitude, but because of genuine neurological differences in how the brain is wired and how it uses dopamine.

THE DOPAMINE CONNECTION

Underpinning almost all executive functioning difficulties is dopamine. The ADHD brain does not produce or use dopamine as efficiently as a neurotypical brain. Dopamine is most associated with motivation, reward and attention. When something is genuinely interesting, the ADHD brain can produce enough dopamine to function brilliantly — hence hyperfocus. When something is routine or low-interest, it cannot generate sufficient dopamine, and executive function falls apart.

This is why the same child who can play video games for three hours without moving **cannot sustain attention on a worksheet for five minutes.** It is not about effort — it is about neurochemistry.

THE CORE EXECUTIVE FUNCTIONS — AND WHAT ADHD DOES TO EACH

Task initiation

The ability to start something, particularly something not immediately rewarding. A young person staring at a blank page for 40 minutes is not being defiant — their brain is genuinely struggling to fire the starting gun. Frequently read as laziness, which compounds the problem enormously.

In school: Reduce the activation energy required to begin. Use prompts, scaffolds, a first sentence already written, or a 'just do one minute' instruction.

Working memory

The ability to hold information in mind while using it — following a three-step instruction, tracking where you are in a task, remembering what you were doing when distracted. A student can appear to have listened and understood, then do something completely different 30 seconds later.

In school: Give one instruction at a time. Write steps on the board. Use visual checklists. Never assume information was retained just because it was received.

Inhibition

The ability to pause before acting — to stop yourself saying or doing something impulsive. In ADHD the brake system is weak. This is where much classroom difficulty originates: calling out, reacting before thinking. It is not a choice in the way it looks.

In school: Pause before responding to impulsive behaviour. Ask: is this defiance or dysregulation? Build in planned movement breaks to reduce the pressure that makes inhibition harder.

Emotional regulation

The ability to manage your emotional response — to feel frustrated without exploding, to receive criticism without falling apart. ADHD brains experience emotions more intensely and have less capacity to moderate them. Rejection sensitivity is particularly significant — a casual comment can feel devastating in a way that seems completely disproportionate.

In school: Choose words carefully when giving feedback. Avoid public correction where possible. A 'disproportionate' reaction is dysregulation, not manipulation.

Time blindness

People with ADHD often experience time in a fundamentally different way — there is essentially 'now' and 'not now.' Something due in two weeks has very little psychological reality until it is suddenly due tomorrow. This is not poor organisation — it is a perceptual difference in how time is experienced.

In school: Use visual timers. Break tasks into short timed chunks. Remind frequently and without blame. Deadlines need to feel real and proximate to activate the ADHD brain.

Planning and organisation

The ability to break a large task into steps, sequence them and execute them in order. Writing an essay, completing a project, organising a revision timetable — all require top-down planning that the ADHD brain finds genuinely effortful, even when the person is highly intelligent.

In school: Provide planning frames and templates. Break large tasks into explicit small steps. Never assume a student knows how to begin just because they understand the end goal.

Cognitive flexibility

The ability to shift attention, adapt to change and let go of one thing to move to another. Transitions — between lessons, tasks, activities — are disproportionately hard for ADHD brains. The rigidity this creates often looks like stubbornness or defiance.

In school: Give advance warnings before transitions ('we are finishing in five minutes'). Allow time to mentally shift. Do not interpret resistance to change as a deliberate choice.

THE OTHER SIDE: STRENGTHS TO CELEBRATE

ADHD is not just a deficit. The same neurological differences that create difficulty with executive function also produce genuine strengths — and these are just as real.

Hyperfocus

When genuinely engaged, the ADHD brain can achieve extraordinary depth of concentration and creative output — often significantly outperforming neurotypical peers.

Creativity and lateral thinking

Divergent thinking, unexpected connections and original approaches to problems — highly valuable in the right environment.

Energy and enthusiasm

Infectious engagement when motivated. Humour, spontaneity and passion that can energise a room — qualities other students often respond well to.

Empathy and resilience

Deep emotional sensitivity and empathy. Resilience built from years of navigating a world not designed for the way their brain works.

The key message

Almost everything a secondary school asks students to do requires strong executive function. For a student with ADHD, every single day involves fighting against the grain of how their brain is wired.

Understanding this changes everything about how we respond. The right support is not a sanction — it is a scaffold.

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