

Cognitive Abilities

ATTENTION DIMENSIONS

AREA	DEFINITION	EXAMPLE IN CLASS	WHAT TO LOOK FOR
ALERTNESS	Alertness is a primary area of attention that enables individuals to become sufficiently energised, mentally aroused and prepared for learning to occur. It allows an individual to temporarily increase and sustain energy in order to respond quickly and accurately to visual or auditory cues over the short term. Without adequate alertness, day-to-day learning, even general everyday activities, can become significantly compromised. Higher level abilities such as attention, memory, self-control, and thinking itself will often be hindered in the presence of low alertness. Alertness is broken down into two further dimensions [cued (prompted) vs. intrinsic (innate and inherent)] & [visual (efficient responsiveness to visual stimuli) vs. auditory (efficient responsiveness to auditory stimuli)].	<ol style="list-style-type: none"> 1. Students are ready (e.g. sitting quietly in their seats) to begin a lesson or a new activity 2. Students respond immediately and promptly to a teacher's instruction (e.g. when called to answer a question, or when called to re-focus their attention) 3. Uniform and stable behaviour at the start of each lesson or an activity (i.e. little variation in energy or mood) 	<ol style="list-style-type: none"> 1. Lethargic and tired behaviour (e.g. yawning, slouching, and increased blink rate) 2. Unresponsive or slow to respond when asked a question or given an instruction. 3. Require more visual or auditory cues to signal that they need to be doing something (i.e. over reliance on the teacher to prompt appropriate behaviour) 4. Hyperactivity – increased level of movement and animation (e.g. constant looking around, tapping of feet and hands, readjustment in posture)
SUSTAINED ATTENTION	Sustained attention is an extension of alertness. Sustained attention allows individuals to persevere and commit to any type of task for a longer period of time and with the same amount of effort and intensity the whole way through. Sustained attention, as a cognitive ability, it is the capacity to maintain adequate energy levels, alertness and effort over a long period of time. Sustained attention can be further broken down into visual (e.g. watch, observe and monitor relevant targets over a long period of time and auditory (e.g. listen, and pick up key sounds and information for a prolonged period of time) dimensions.	<ol style="list-style-type: none"> 1. Even and consistent behaviour and performance in classroom activities (e.g. reviewing previously learnt material, proof-reading of assignments, reading a long book, completing a challenging question with several steps) 2. Involved and engaged on the task throughout the entire lesson (i.e. asking questions, responding to question being asked, clarifying information) 3. Behaviour is aligned to task requirements (e.g. moving briskly when asked to quickly grab a book and sit down, or being quiet when asked to watch a video) 	<ol style="list-style-type: none"> 1. Frequently distracted when faced with the same tasks over a long period of time 2. Miss segments of information during a class – inability to keep up with information flow 3. Require more task variety or more frequent breaks to stay engaged 4. Bounce from one task to another without seeing one through to completion

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SPATIAL ATTENTION	Spatial attention allows individuals to direct and shift the visual focus of their attention between things happening right in front of them (central cues) to things happening in their broader field of vision (peripheral cues). Spatial attention is the ability to detect and respond to visual cues presented both in the periphery and in the immediate vicinity or central fixation point. This process involves being able to disengage attention from one stimulus, shift this focus and then re-engage it to focus on a new or different stimulus. The ability helps students to orient and change their placement or location of attention in order to identify and process information.	<ol style="list-style-type: none"> 1. Visually following a teacher's sequencing of information 2. Finding key details amongst a whiteboard full of information 3. Tuning into key features of skilled performance by an athlete, actor or dancer 4. Students with stronger spatial attention abilities are quicker to engage in the classroom without repetitive behavioural cues or directions. 5. Students are aware of things that are happening around them while still maintaining on-task behaviour 	<ol style="list-style-type: none"> 1. Find it difficult to shift their focus between a teacher, white-board, a video and their laptop/note pad effectively 2. Confused when trying to sequence and capture information unless it is made very clear and packaged in a step-wise procedural manner 3. Need multiple cues in order to disengage from a task and move on to a new task 4. Struggle in sporting activities which require continuous shifting of attention between the ball, team mates and opposing players, or music recitals where the student moves their focus between musical notes and the conductor at appropriate times
SELECTIVE ATTENTION	Selective attention is the ability to differentiate between relevant and contextually similar but irrelevant visual and auditory targets, information, and tasks. That is, the capacity to quickly and effectively evaluate and act on a task or stimulus amongst other similar options.	<ol style="list-style-type: none"> 1. Classifying the type of problem presented so that the correct maths formula is applied 2. Paying attention to the teacher's voice at the same time as ignoring the voice of a support teacher 3. Listening for key principles whilst bypassing the details given in examples 4. Identifying the key arguments presented in an emotional speech, or connecting the characters in play to understand their relationships 	<ol style="list-style-type: none"> 1. Lose track or place when typing or writing due to other information presented by the teacher or on the board 2. Work or attempt items or questions out of sequence or without considering all relevant information presented 3. Miss critical information presented verbally by the teacher or in a video due to other competing information

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FOCUSED ATTENTION	Focused attention is the ability to focus and effectively carry out audio-visual tasks (tasks that require both auditory and visual information) among other competing distractions. These distractions can be environmental (e.g. noise, chatter, seating arrangements/changes, classroom clutter, placed or misplaced historical learning aids, artwork and project material), class dynamics (e.g. fluid or structured classroom protocols, student inquiry, transition activities, working groups, student idle talk), or personal (one's own preferences and expectations, internal thoughts, ideas, or emotional responses).	<ol style="list-style-type: none"> 1. Concentration and focus remains intact despite visual and auditory distractors (e.g. listening to the teacher, while outside class students are walking or talking) 2. Effort and intensity of the work produced in class is steady with little variation in output (e.g. not slacking off or disengaging as the lesson nears the end or in anticipation of another lesson) 3. Notes, journal and diary entries are well structured and complete in information, despite the busy and loud class environment 	<ol style="list-style-type: none"> 1. Bouncing from distraction to distraction, driving their attention to be caught by whatever is occurring in their environment 2. Increased or unnecessary need for breaks (e.g. toilet or drink of water) 3. Difficulty reading or completing a test when there is noise or environmental distractions 4. Look busy and physically active but not focused. They can be hyperactive and restless as well 5. Mind wandering off-task, student appears quiet and non-disruptive, yet may be absorbed in their own thoughts and distracted from the task at hand
DIVIDED ATTENTION	Divided attention is the highest order area of attention and often the last to fully crystallise and develop in students from primary school to secondary school. Divided attention concerns the use of multiple sources of information rather than a single source. It allows individuals to switch their attention and handle relevant but competing information. Specifically, it is the ability to scan multiple streams of information simultaneously and respond to multiple tasks or task demands based on urgency and priority.	<ol style="list-style-type: none"> 1. Students listening to the teacher while paying attention to the material being written up on the board, to different comments being made during a group task 2. Simultaneously Listening to instructions while taking notes, mentally repeating information heard from a video, and integrating new knowledge with existing knowledge 3. Remembering and conducting a multi-step instruction from the teacher while also talking to a peer 	<ol style="list-style-type: none"> 1. Struggle to multi-task (or rapidly sequence tasks) and will prefer to focus on one task at a time 2. Have trouble listening to and incorporating additional verbal information or instructions when they are already engaged in a task 3. Ignore additional critical cues when they are already attending to an activity 4. Struggle to listen and synthesise verbal information from the teacher while writing it down in short form or summary. 5. Not adequately monitor themselves to check and act on learning needs, expectations, and plans