Stories build Functional Connectivity.
What is Functional Connectivity and why is it important?

The human brain's relationship with stories is as long as humans' relationship with fire. Sunlit conversations addressed practicalities or gossip, but fireside tales evoked the imagination, preserved history, settled disputes and established social customs[i]. Stories can be described as narratives about human (or human like) agents, their relationships and their fortunes[ii]; they are "created for the purpose of engaging readers"[iii]. Le Guin describes stories as carrier bags for memories [iv], and indigenous Australians created multidimensional stories called songlines that encompassed knowledge, history and social mores that have endured for tens of thousands of years[v].

Narrative comprehension takes place in the Default Mode Network (DMN), an interconnected network of brain regions active when our brain is at rest[vi]. DMN is most active during REM sleep, mind wandering and reading. However during this time it also monitors and interprets sensory information from external and internal environments including pain.

Neuroscience has linked the DMN with recollection and prediction, thoughts about others, creativity, imagination and impulse, navigation and spatial cognition, emotional responses, and aesthetic experiences.

But stories are much more than entertaining storage devices. Neuroscience is now finding that reading stories increases functional connectivity (FC)[vii] between the DMN, the Salience network and the Central Executive Network (CEN)[viii]. FC describes the likelihood that these different regions of the brain will become active at the same time[ix]. The DMN is responsible for random, creative, diverse and often disconnected thoughts, as well as interpreting external and internal stimuli; the SN determines which thoughts and stimuli are likely to be relevant and meaningful and therefore productive and useful; while the CEN[x], maintains working memory[xi], and is responsible for controlling attention, logical judgment, and decision-making[xii].

Not only are high levels of FC is linked to creativity, decision making, divergent thinking, concept development and academic performance and even healthy aging, but increased FC is also linked with higher levels of resilience and wellbeing in young people[xiii].

Neuroscience is providing empirical evidence from around the globe linking stories to Functional connectivity. Functional connectivity underpins to self-actualisation, wellbeing, healthy aging and social adaptation. Yet many countries are diverting funds from qualified school library staff and story based resources. How can educators let this continue?

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[i] Wiesser, 2014
[ii] Bruner 1986

Judith Wakeman 2025

[iii] Oatley, 2012
[iv] Le Guin 1997
[v] Kelly, Memory code
[vi] Raichle 2001
[vii] Harding & Willem, 2020
[viii] Also called the Executive control network
[ix] Much like the likelihood that if you enjoy a movie, your friend will also enjoy that movie
[x] Also called the frontoparietal network or cognitive control network
[xi] Hampson, 2006
[xii] Yokoyama 2024
[xiii] Yan Tse et. al.,2024