Teaching students about the malleable brain

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Project Background
What did I learn?
Year 12 responses

Failure: It is not my fault.

You're either good at it, or I'm not.

7. My abilities determine everything.

Intelligence and ability are not fixed.

Ego connected to performance (develops vulnerability)

Plateau early, achieve less than my full potential.
Whole school approach

• Concept is “bigger than Ben Hur”

• Start with one keystone belief

Brain plasticity is a two-way street; it’s just as easy to generate negative changes as positive ones.
Years 4-9

• Adaptation of existing programs
Years 10, 11 and 12

- Greater emphasis on neuroscience findings
- Show the original data and research

Response of the Brain to Enrichment

by Marian Cleeves Diamond

Gifted Students’ Implicit Beliefs About Intelligence and Giftedness

Matthew C. Makel1, Kate E. Snyder2, Chandler Thomas1, Patrick S. Malone1, and Martha Putallaz1

Conceptualizing Concurrent Enrollment: Why High-Achieving Students Go For It

Lynn Dare1 and Elizabeth Nowicki1

Physical activity increases mRNA for brain-derived neurotrophic factor and nerve growth factor in rat brain

Shawne A. Neeper1,2, Fernando Gómez-Pinilla3,4,5, James Choi6, Carl W. Cotman1,2,6,7,8


What will it look like?

• 2 x 50 minute lessons – 2 weeks apart
• Lesson 1: show scientific findings – students asked to summarise findings in their own words
• hypothetical student – discouraged – use what they had read to advise
what will it look like?

• Second core belief – lesson 2

• “sense of purpose”
• How could the world be a better place?
• What would be a reason they work hard?
• How does learning help to achieve these goals?
It’s not that I’m so smart; I just stay with problems longer.

I can accept failure. Everyone fails at something. But I can’t accept not trying.

Don’t tell me how talented you are. Tell me how hard you work.

The good learning pit is in here where you challenge yourself.

Instead of: “I messed up again.” Say: “Mistakes help learn.”
My project so far....

I thought

What people think it looks like

What it really looks like
...yet
Emerging Leaders 2016 program

- People leadership - Kylie Noonan
- Strategic leadership - Kylie Noonan
- Personal Leadership - Mark Evans
• A cognitive approach to motivation and personality

• Mind-Set Interventions Are a Scalable Treatment for Academic Underachievement
Why do beliefs about intelligence influence learning success? A social cognitive neuroscience model

A survey of mindset theories of intelligence and medical error self-reporting among pediatric housestaff and faculty
• A New Window into Structural Plasticity in the Adult Visual Cortex.