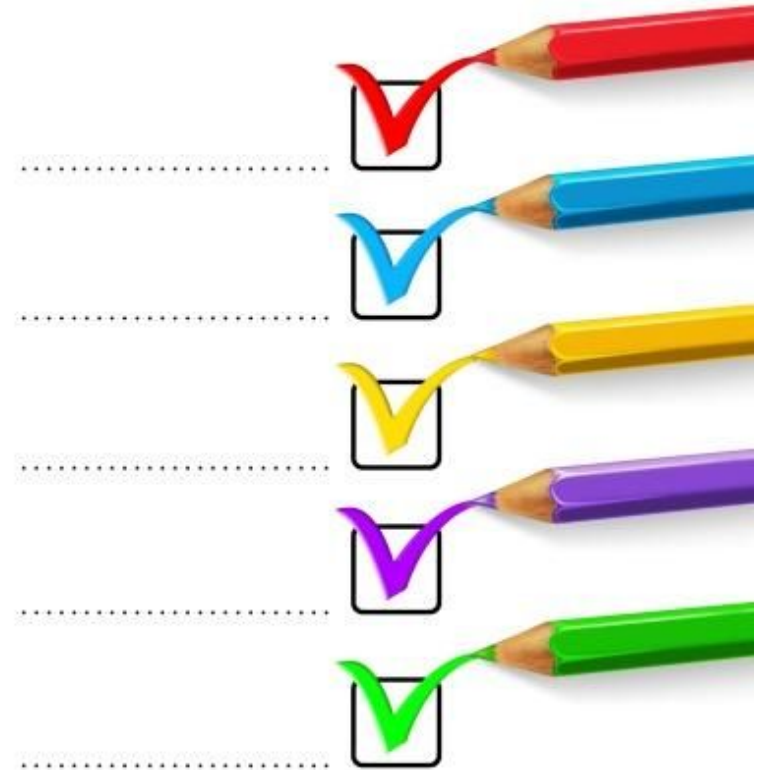


THE GROWTH MINDSET GOAL-SETTING BOOKLET



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Overview of the Steps to Building Growth Mindset

#1: LEARN AND TALK ABOUT NEUROPLASTICITY

Why should we learn and talk about neuroplasticity? Here's a quote from Stanford's Dr. Robert Sapolsky, in his book *Behave*:

"[...]Neuroplasticity makes the functional malleability of the brain tangible, makes it "scientifically demonstrated" that brains change. That people change.

[...] A different world makes for a different worldview, which means a different brain. And the more tangible and real the neurobiology underlying such change seems, the easier it is to imagine that it can happen again."

A more technical description of neuroplasticity is on the next page; less technical explanations are in the videos I suggest. Here are three key phrases to describe it:

- "Experience builds brain architecture" (Harvard Center for the Developing Child)
- "The brain is like a muscle that grows with use" (Stanford PERTS and Mindsetkit.org)
- "Neurons that fire together, wire together" (Donald Hebb in the 1949 book, *The Organization of Behavior*)

#2: REFRAME AND WELCOME MISTAKES

But only with self-reflection and new strategies! (Don't just celebrate mistakes if someone is clearly not learning!)

3: HIGHLIGHT PROCESS AND "MICRO" PROGRESS

Acknowledge things that are more in someone's 'internal locus of control': effort, strategies, self-reflection (Instead of "Innate" Talent Or Intelligence); look for self-progress more than comparison; aim for increments rather than final outcomes

#4: ACTIVATE SELF-TRANSCENDENT PURPOSE

This is an awareness that what we are doing is meant not only for us but to make life feel easier for someone else.

Overview of the Goal-Setting Sections

#1: LEARN, INTERNALIZE, TEACH

For each of the concepts related to building growth mindset, there is a section with a brief summary or explanation, plus videos, articles and activities to try. In education research, we see that the 'best teachers are the best learners'. For us to authentically teach something, we need to be able to explain from a standpoint of a beginner, someone who is 'starting from scratch' and going through the many learning dips, discomfort and awkwardness of learning a new skill, habit, belief or behavior.

That's why it's important to learn about these concepts, and then reflect on how they present in your own life – so that you can draw on personal examples that will help the people you are leading and teaching feel a sense of authenticity and vulnerability from you – two key ingredients that lower people's defensiveness, which primes them for learning. The next step is to teach someone what you have learned: this engages sophisticated and diverse areas of the brain to help the learning become truly 'internalized'.

#2: SELF-REFLECTION

The frontal lobes of the brain – particularly the midline areas, and specifically the medial prefrontal cortex (the MPFC) - are key to our ability to be observers of ourselves and to monitor the sensations in our body, which can help us to slow down our automatic reflexes when we get stressed. As Bessel Van der Kolk explains, "being able to hover calmly and objectively over our thoughts, feelings, and emotions (an ability called 'mindfulness') and then take our time to respond allows the executive brain to inhibit, organize, and modulate the hardwired automatic reactions preprogrammed into the emotional brain." (*The Body Keeps the Score*).

By taking time to reflect on how these concepts appear in your life, helps you activate those areas, which can over time strengthen them.

3: WHAT MIGHT STOP YOU?

NYU's Gabriele Oettingen has been studying goal-setting and motivation for decades. Her work reveals that simply daydreaming or fantasizing about a goal does not energize us into the action needed to achieve it. In fact, it can create a 'physiology of complacency'.

What's needed? Something she calls 'mental contrasting'. In her research, students are told to imagine the prize they will get once they complete an assignment AND imagine several of their own behaviors that could prevent them from winning. Other students are told only to fantasize about the prize. The students who engage in the mental contrasting outperform those who don't. See: <https://psych.nyu.edu/oettingen/> for more.

Learn + Talk About Brain Plasticity

Summary

- The most studied type of neuroplasticity is one form of synaptic plasticity called Long-Term Potentiation (LTP). For LTP to occur, a neurotransmitter called glutamate needs to bind to NMDA receptors. The NMDA receptor is an ion channel that is normally blocked by a magnesium ion.
- Experience that causes repeated firing across a synapse “strengthens” this signal by removing the magnesium block, which allows currents – especially calcium currents – to flow through the NMDA receptors. This same mechanism is also reversible, which can weaken synaptic connection – this is called Long-Term Depression (LTD).
- LTP is a form of plasticity that involves transient *molecular* changes, but learning and memory also lead to *structural* changes that alter brain architecture.
- LTP occurs throughout the nervous system. For example, fear conditioning involves LTP in the basolateral amygdala.
- Experience and learning lead to the creation of entirely new synapses. Sensory experience can produce structural changes to and increased number of tiny structures in neurons called dendritic spines. Astrocyte and microglial cells also play important roles in synaptic plasticity.

Sources: *Neuroplasticity* by Moheb Costandi & *Behave* by Robert Sapolsky

Videos

Watch: [“How to Teach Growth Mindset in 5 Steps”](#)

[“How to inspire other to adopt a growth mindset”](#)

[“Don’t talk about growth mindset until you talk about this”](#)

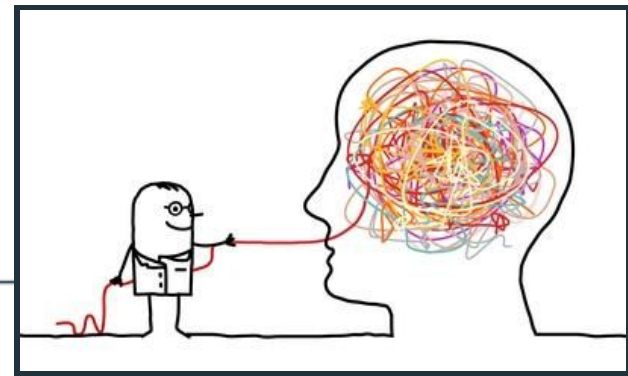
Sentis: [Neuroplasticity](#)

Read: [Understanding Brain Plasticity is Today’s Moral Imperative:](#)

[Five MUST-read books for 2018](#)

[Altered Traits, by Daniel Goleman and Richard J. Davidson](#)

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Reflect:

What does it mean to you personally that your brain has been shaped largely by your experiences, especially your earliest experiences?

How does the fact that the human brain is highly ‘experience-dependent’ change the way you look at your staff or students?

Goals for this quarter:

I will learn and talk about neuroplasticity by doing the following:

Questions to help me attain this goal:

How will I explain myelination and how experiences build brain architecture?

*What would prevent me from learning or talking about this?
What could I do get around that?*

Reframe + Celebrate Mistakes

Summary

- Mistakes 'neurobiologically' grow your brain. Struggle and failure coincide with growth and evolution, not weakness or inferiority. They are the very ingredient of anything NEW.
- Celebrating mistakes and embracing failure as necessary for growth helps staff (and clients, students) feel less afraid of leaving their comfort zones and risking failure. This minimizes defensiveness, which can keep people in a state of mobilization or paralysis.
- There is electrochemical activity that ONLY happens when we make a mistake (even if we're not aware it's a mistake). If you're creating something new, it *will* feel like a struggle! Otherwise you're just doing something you already know!

Examples / Videos

Watch my YouTube:

stefaniefayefrank.com/why-mistakes-grow-your-brain/

Read Articles: "Mistakes Grow Your Brain"

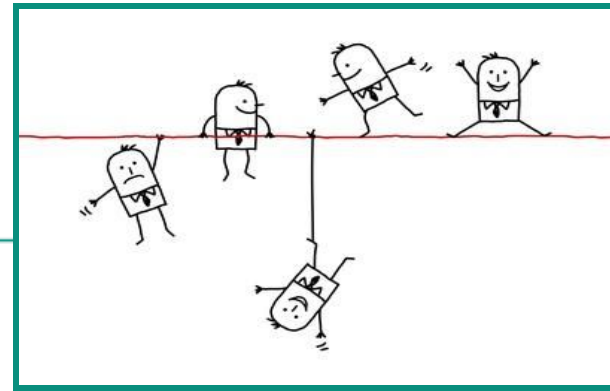
<https://www.youcubed.org/think-it-up/mistakes-grow-brain/>

<http://expandingmindsets.com/2017/11/07/mistakes/>

Crumpled Reminder

<https://www.mindsetkit.org/topics/celebrate-mistakes/downloadable-activity-ideas>

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Reflect:

What is a recent mistake I made? How did I respond? Did I reflect on what I could learn from it, or did I feel angry, blaming, sad?

What is a recent mistake a student or staff member made? How did I respond?

Goals for this quarter:

I will celebrate mistakes with staff/students this quarter by:

Questions to help me attain this goal:

How will I explain the importance of making mistakes?

What would prevent me from celebrating mistakes? What could I do get around that?

Highlight Micro-Progress + Process

Summary

- Praising effort, strategies, focus, perseverance and process increases engagement, effort, use of new strategies and persistence on challenging tasks – significantly higher than when people are praised for the results or their intelligence
- Praising effort also significantly increases post-failure performance
- Praising effort and process increases self-efficacy because these are skills and behaviors that are always under a person's control.

Examples/Videos

Watch my video about comparison:

stefaniefayefrank.com/highlight-micro-progress-to-build-creative-mindsets/

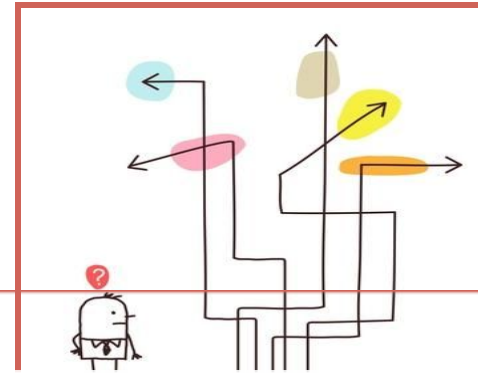
Process Praise instead of Person Praise:

<https://www.mindsetkit.org/topics/praise-process-not-person/dos-donts-of-praise>

Mindset Verbal Messaging:

<http://schools.nyc.gov/NR/rdonlyres/8EA47553-FEE3-4753-8BFC-D6688FC2D61F/0/GrowthMindsetFeedbackTool.pdf>

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Reflect:

When was the last time I specifically praised a staff member for their strategy, process, perseverance or effort? What seemed to be the result of this?

What is the danger of only praising effort without guiding others to reflect on new strategies if they are not learning or improving?

Goals for this quarter:

I will praise staff for effort, strategy, focus, perseverance this quarter by:

Questions to help me attain this goal:

Which activities, feedback, articles, videos could I use in the workplace to encourage a celebration of effort, strategy, focus, perseverance?

What would prevent me from praising process? What could I do get around that?

Activate Self-Transcendent Purpose

Summary

- Self-Transcendent Purpose is a goal motivated both by a chance to benefit the self *and* make life easier for someone else (Ex. "build bridges to help connect people" rather than "being an engineer")
Go to: perts.net/static/documents/yeager_2014.pdf
- Studies show that people with a self-transcendent purpose: persist longer on a boring task rather than give in to a tempting alternative; increase deeper learning behavior on tedious review materials and sustain self-regulation over the course of increasingly boring tasks
- Read: [Students Thrive When They See Purpose in their Learning](#)
And research on: [What we Know About Purpose and Relevance](#)

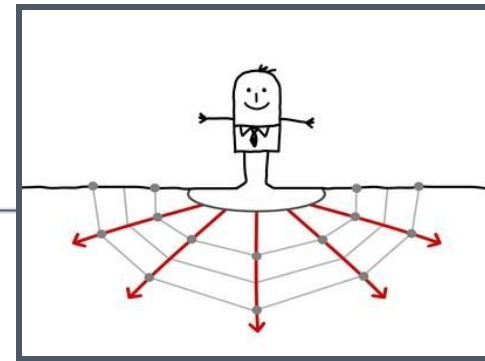
Reflection for staff or students:

"What do you think will be more painful? Failing at something you are trying -OR- not showing the world what you are capable of?"

Ask staff to reflect on 'two layers out' in terms of who they are affecting: layer 1 is the people they are directly serving. Layer 2 are the people affected by who they are serving. They can go even further out than that. Eg, if they are serving parents (layer 1), those parents are affecting their children (layer 2): have them reflect on layer 3: how their children are interacting with the world at large/other people.

For teachers: Give students assignments and missions. Find ways to help them see how a special quality they have can be used for a task that can serve others. Create a lesson where they need to teach a younger person (penpal or in person)

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Reflect:

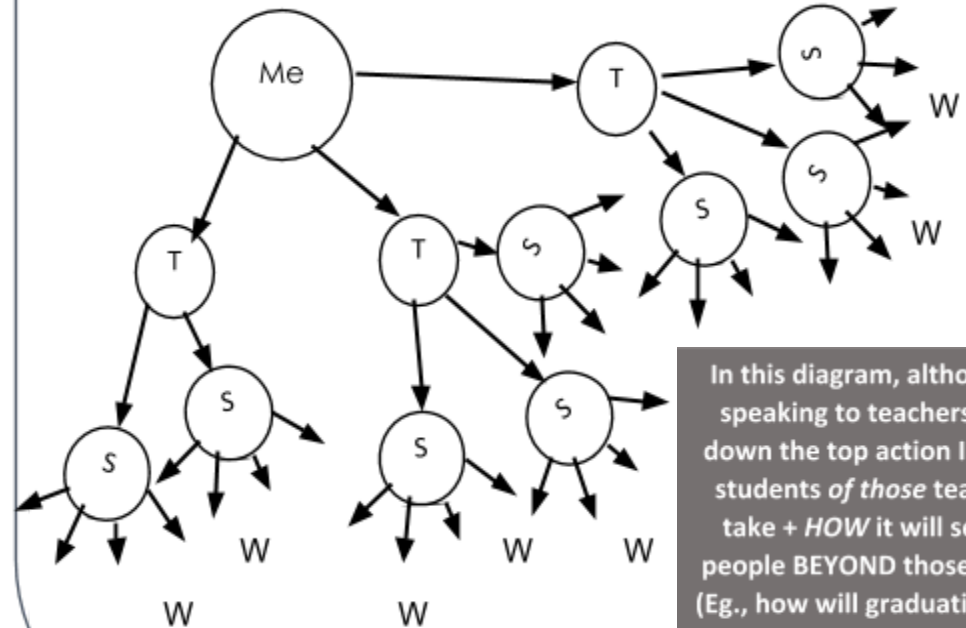
*Simon Sinek says 'start with why'... I modify this to 'for whom?'
Who is this for... and then a level deeper than that: who are the people affected by the person I am serving directly?
Think about what experience you hope those outer layers to have.
Try to reflect on Layer 3 (see Examples on the left & diagram below)*

Diagram I use for myself and with clients/students:

'Self-Transcendent Map' Eg., When I am presenting to teachers

T = Teachers S = Students

W = the world around the students (people/places/ideas/movements)



In this diagram, although I am speaking to teachers, I write down the top action I want the students of those teachers to take + HOW it will serve the people BEYOND those students (Eg., how will graduating college affect - not them - but the people in their community)

Final Thoughts

There are dangers to focusing exclusively on 'building growth mindset'.

One of those dangers is that by creating a narrative that 'only beliefs matter', we neglect the critical nature of conditions in our environment, stress levels of our caregivers, deprivation of nurturing and enriching conditions, as a few examples of things that absolutely, definitely have nothing to do with our beliefs about ourselves, and that absolutely, definitely influence the brain's architecture and functioning. Certain conditions need to be in place in our earliest years of life (including while we're in the womb), in order for our most flexible and evolved brain features to be accessible to us

The other danger is that many people are focusing on growth mindset – and neglecting the importance of trust and relationship in a learning environment.

Without a sense of psychological safety, human nervous system architecture is wired to keep us on the defensive, and this minimizes our access to the features of the brain and body needed for learning, innovative problem-solving and creativity.



So, in all honesty – it is NOT A 4-STEP PROCESS to build growth mindset.

First, because nothing involving human development and behavior would EVER be that simple!!! And anyone who promises that is staying on a prescriptive, superficial layer. That being said, we need to start somewhere, right? That's why I call this a '4-step process'... just to begin a new conversation and perhaps a new way of looking at behavior, intelligence and human dynamics.

Secondly, the FIRST step is always SAFETY. By safety, I don't mean the removal of threat. I'm talking about the presence of certain conditions and human interactions that actually induce a physiological state that allows us to be our most human, our most evolved.