Curiosity
Creativity
Innovation
& the Young Mind
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Brain

- Patterning activity: the brain loves patterns!
- The power of the picture! The brain processes images 60,000 times faster than text
- The brain loves story! If you don’t say it, it will create it

Tips for storytelling in the classroom:
https://www.teachthought.com/pedagogy/30-storytelling-tips-for-teachers/

https://www.edutopia.org/blog/storytelling-in-the-classroom-matters-matthew-friday

Brain

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Brain

@MiamiEdGuru
Curiosity

**Familiarity vs. Novelty**

If you stay too close to the familiar, you’ll be left behind. Go too far and no one may follow you there.

Travel different distances from the standard - *cover the spectrum* of creative ideas (feel out the border of impossible) set a stake on the far reaching horizon so you can figure out where to go.
**Curiosity**

**Familiarity vs. Novelty**
- Is this new or unexpected?
- Can I handle this?

How to find the sweet spot to creative things?

Induce curiosity:
1. Create a gap between what they know and what they think they want to know
2. Provide a tiny bit of information
3. Not an answer, but a perspective on things
5 dimensions of curiosity

1. Joyous Exploration—desire to seek out new knowledge and information, and the subsequent joy of learning and growing.

2. Deprivation Sensitivity—this dimension has a distinct emotional tone, with anxiety and tension being more prominent than joy—pondering abstract or complex ideas, trying to solve problems, and seeking to reduce gaps in knowledge.

3. Stress Tolerance—this dimension is about the willingness to embrace the doubt, confusion, anxiety, and other forms of distress that arise from exploring new, unexpected, complex, mysterious, or obscure events.

4. Social Curiosity—wanting to know what other people are thinking and doing by observing, talking, or listening into conversations.

5. Thrill Seeking—the willingness to take physical, social, and financial risks to acquire varied, complex, and intense experiences.
Joyous Exploration: the “why” question
Deprivation sensitivity: wanting to close the gaps
Stress tolerance: embrace ambiguity for new, risky experience
Social curiosity:
Thrill seeking: take physical risk to get a new experience
4 types of curious people

1. **The Fascinated**—high on all dimensions of curiosity, particularly Joyous Exploration
2. **Problem Solvers**—high on Deprivation Sensitivity, medium on other dimensions
3. **Empathizers**—high on Social Curiosity, medium on other dimensions
4. **Avoiders**—low on all dimensions, particularly Stress Tolerance
What did you learn about your students yet.
How to produce curiosity in the classroom?

1. Find or create the “hook” in every topic
2. Give students choice and voice
3. Provide time for unstructured exploration
4. Create a “parking lot”
5. Teach students to ask questions

https://curiosity.com/
Nurturing Young Innovators
#nurturingyounginnovators

- Allow children to try a new thing without instructions; trying new things and taking calculated risks can help young children develop perseverance; have them make the plan (ex. Stem projects- open-ended)
- Focus on process over product
- Makerspace- recycled materials,
- [www.pinterest.com/ltaddei2/nurturingyounginnovators/](www.pinterest.com/ltaddei2/nurturingyounginnovators/)
- “You have to systematically create confusion, it sets creativity free. Everything that is contradictory creates life.”
- **Systematic Inventive Thinking** uses innate skills by imposing changes or transformations on a system and asking whether the result makes sense and adds value
Creativity

- Give time for students to be creative.
- 100 ideas

*Bending, breaking, and blending*

We transform the raw materials of our experiences by bending, breaking, and blending them.

We update the things that we love. We show our love for things by remodeling them. Treat the past as treasures, but not untouchable. Imitating the model isn’t the landing point, it’s the starting point.
Innovation

- Apply creativity to solve new problems
- Know your passion
- 100 ideas

Tina L. Seelig, PhD
- CreativityRulz blog (link)
TED Talks

Let's Teach Kids to Be Entrepreneurs
https://www.ted.com/talks/cameron_herold_let_s_raise_kids_to_be_entrepren eurs/up-next

Tina Seelig
https://www.youtube.com/watch?v=gyM6rx69iqg&vl=en

Todd Kashdan
https://www.youtube.com/watch?v=AlywVkAXa

Ken Robinson
https://www.ted.com/talks/ken_robinson_says_schools_killCreativity/up-next
TED Talks

The storytelling animal: Jonathan Gottschall
https://www.youtube.com/watch?v=Vhd0XdedLpY

You matter: Angela Maiers
https://www.youtube.com/watch?v=7FHDHUzRnms

The paradox of choice: Barry Schwartz
https://www.ted.com/talks/barry_schwartz_on_the_paradox_of_choice/up-next
Articles


https://medium.com/@toddkashdan/what-are-the-five-dimensions-of-curiosity-7de73684d53a

Sandboxing approach- free from the fear of error

https://medium.com/sandbox/https-medium-com-tlaboutka-how-to-accelerate-your-learning-in-10-steps-3d3f851ac665
Articles

https://www.psychologytoday.com/blog/the-guest-room/201710/how-your-brain-takes-good-ideas-and-makes-them-better

https://www.linkedin.com/pulse/understanding-neuroscience-fuels-creative-thinking-can-david-eagleman/?trackingId=ZfsD8VVK8jeUGHkd%2BjY40A%3D%3D

https://ideas.ted.com/three-ways-to-help-any-kid-be-more-creative/

https://www.nytimes.com/2017/12/03/opinion/lost-einsteins-innovation-inequality.html

Articles

https://www.linkedin.com/pulse/figure-out-your-confidence-passion-matrix-cheryl-yeooh/

https://jscaff.com/2018/02/16/designing-for-curiosity/

http://corwin-connect.com/2016/12/5-ways-activate-curiosity-classroom/


Five Dimensions of Curiosity

Inventory
Resources

Engagement by Design: creating learning environments where students thrive
https://resources.corwin.com/engagementbydesign

The Wonder Wall by: Peter Gamewell
https://www.youtube.com/watch?v=TiuDs-1-7wc

Design Thinking: Sandy Speicher

The Creators Code: Amy Wilkinson
https://www.amywilkinson.com/

The Curiosity Advantage by Todd Kashdan
https://www.youtube.com/watch?v=CzBageKXuys