

Spoon feeding in the long run teaches us nothing but the shape of the spoon – E. M. Forster

The technicalities matter a lot, but the unifying vision matters even more – T. Nelson



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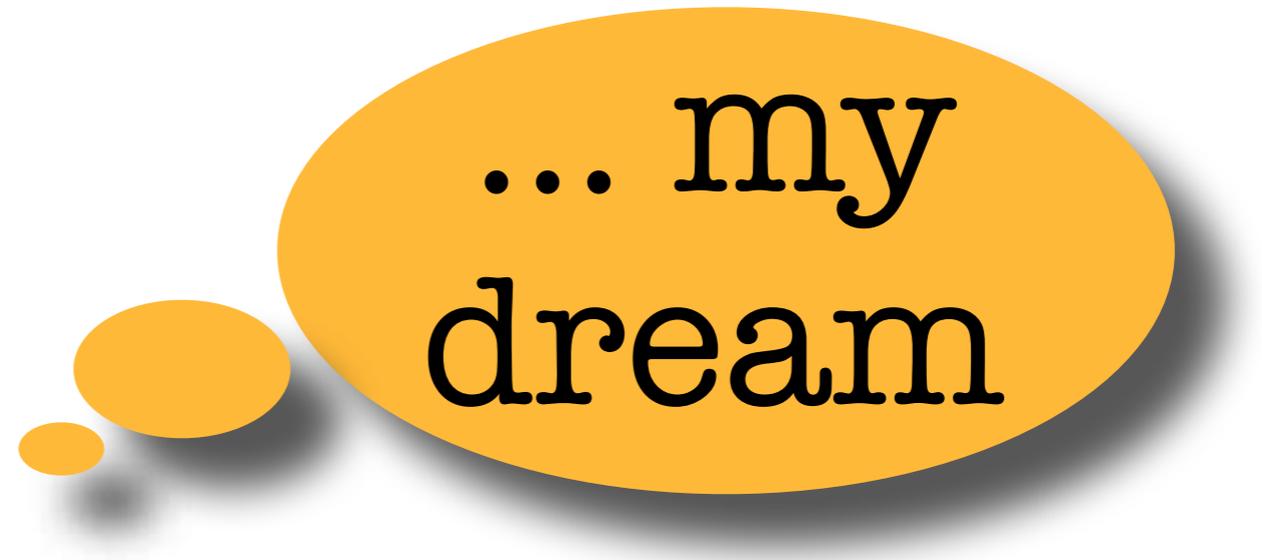
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Thanks



A bit about me

... my
dream





MICHIGAN STATE
UNIVERSITY

College of Education

Creativity

ambigram

Creativity

challenges

challenges

Creativity

Defining Creativ**IT**y?



I know
it when
I see it!

(Justice Potter Stewart 1964)

Creativity

Creativity





Novel



Fresh, unusual, unique,
surprising, startling,
astonishing, astounding,
germinal, trendsetting,
radical, revolutionary,
influential, pioneering...



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UNIQUE

JUST BECAUSE YOU ARE UNIQUE DOES NOT MEAN YOU ARE USEFUL



Effective



Valuable, important,
significant, essential,
necessary, logical, sensible,
relevant, appropriate,
adequate, effective,
functional, operable, useful,
user-friendly



Don Norman's tea pots!



Whole



Organic, ordered, arranged, organized,
formed, complete, elegant, graceful,
charming, attractive, refined,
complex, intricate, ornate, interesting,
understandable, meaningful, clear,
self-explanatory, well crafted, skillful,
well made, meticulous, careful

Thus a creative product is

Novel

Effective

whole

Creativity is a
goal orientated **process** of
developing solutions that are

Novel

Effective

Whole

But...

Where do **NEW*** ideas
come from?

Creativity is just
connecting things
— Steve Jobs



My response to Mr. Jobs...

ARGHAAAAAAAAA!!



If only it were that easy...

.... **the creative process itself will never be easy**... this crux of combinatorial creation – **that magic moment** when ideas click together and “make a stable combination” – **cannot be forced.**

We can, however, **optimize our minds** for combinatorial creativity – by **enriching our mental pool** of resources with diverse, eclectic, cross-disciplinary pieces which to fuse together into **NEW** combinations – Maria Popova



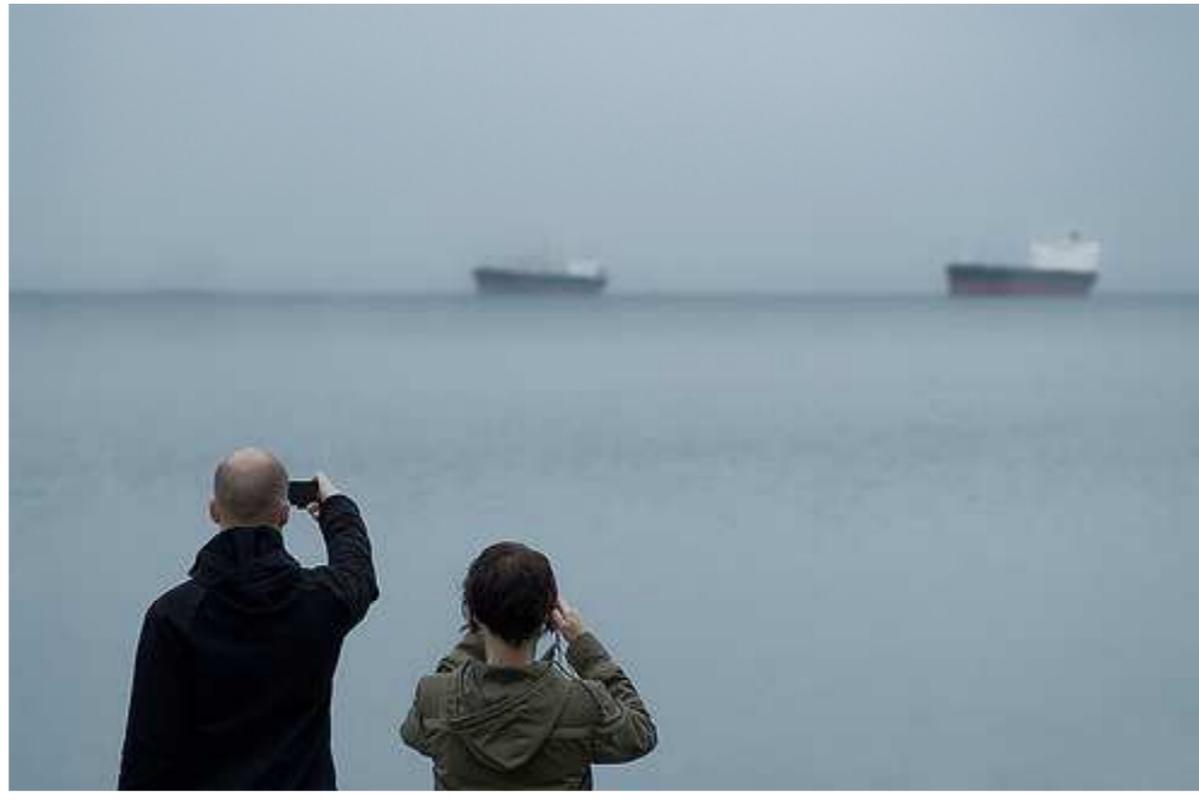
Combinatorial creativity
+ the cross-pollination of
disciplines

The paradox...



Being both...
in a discipline
and yet
outside of it

The importance of disciplinary knowledge



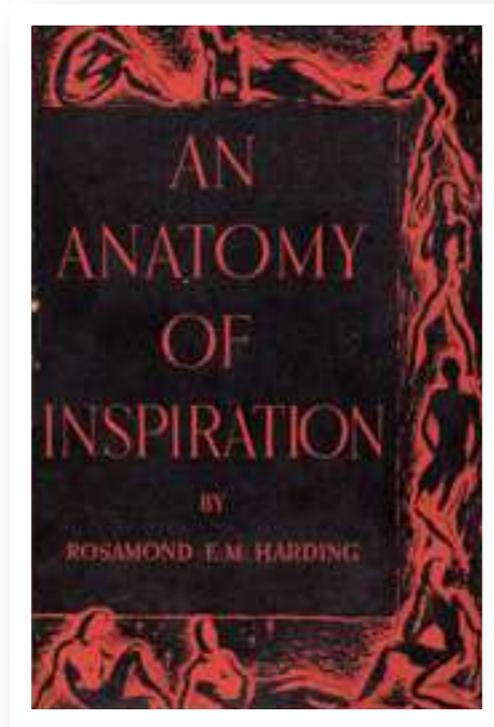
Disciplines teach
us to see

Purposes | Knowledge | Methods | Forms

Art | Mathematics | Music | Science
Engineering | History | Physics
Political science | Education

Disciplines teach
us to see

Purposes | Knowledge | Methods | Forms



Rosamund E. M. Harding (1899 - 1982)

Without the rock of knowledge genius has no foundation

Originality depends on new and striking combinations of ideas. It is obvious therefore that the more a man (sic) knows the greater scope he has for arriving at striking combinations. And not only the more he knows about his own subject but the more he knows beyond it of other subjects.

Success depends on sufficient knowledge of the special subject, and a variety of extraneous knowledge to produce new and original combinations of ideas [and]... technical skill [which] must be so far developed that it is never a hindrance to the flow of ideas.

(in) Disciplined
learning

Foundations

Science



Art

Creativity

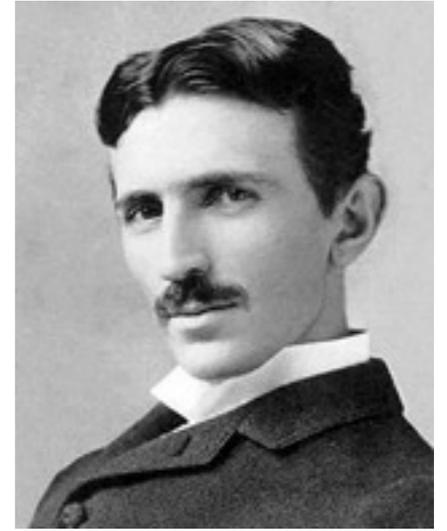


Foundations

Science

Art

Creativity



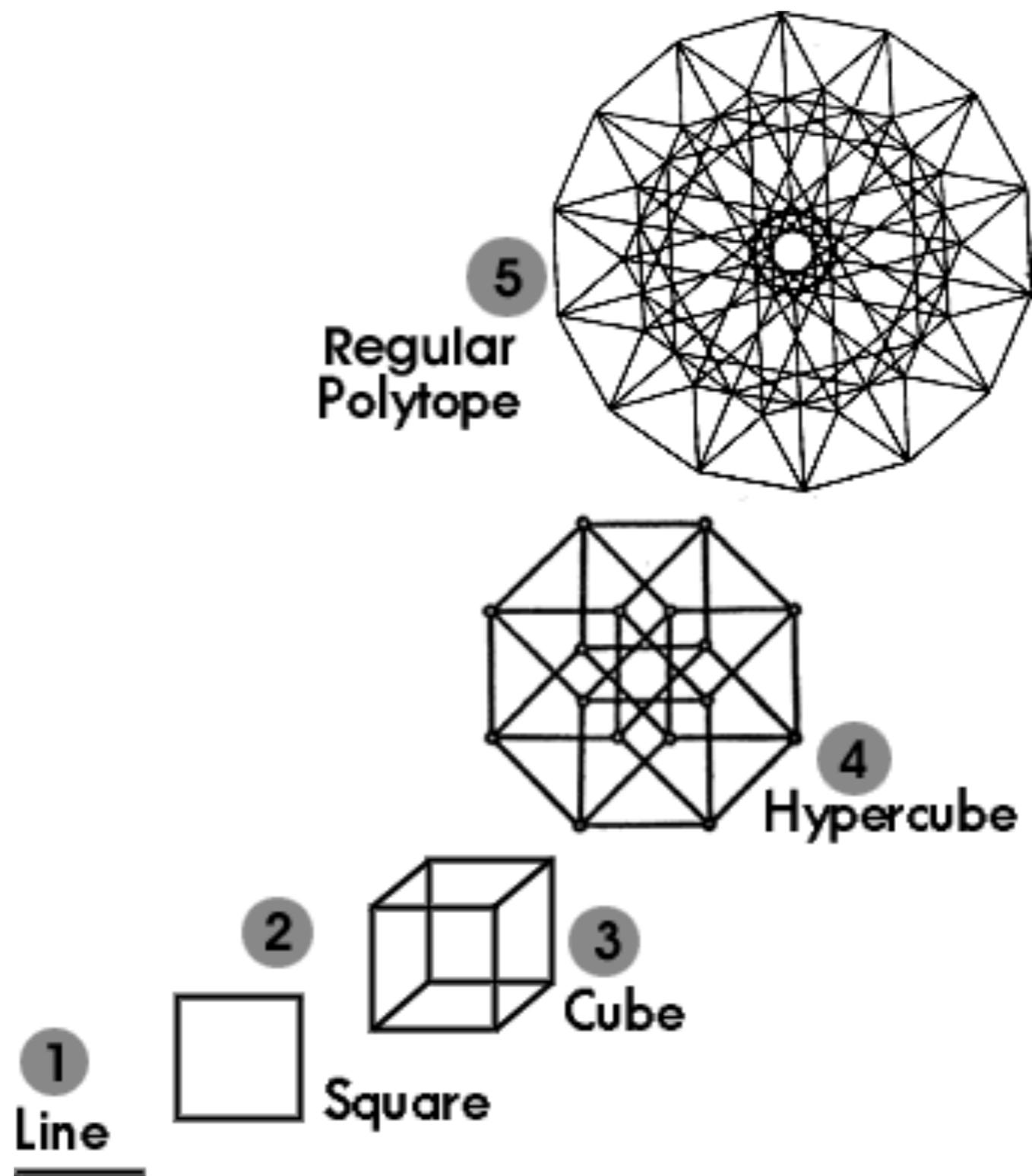


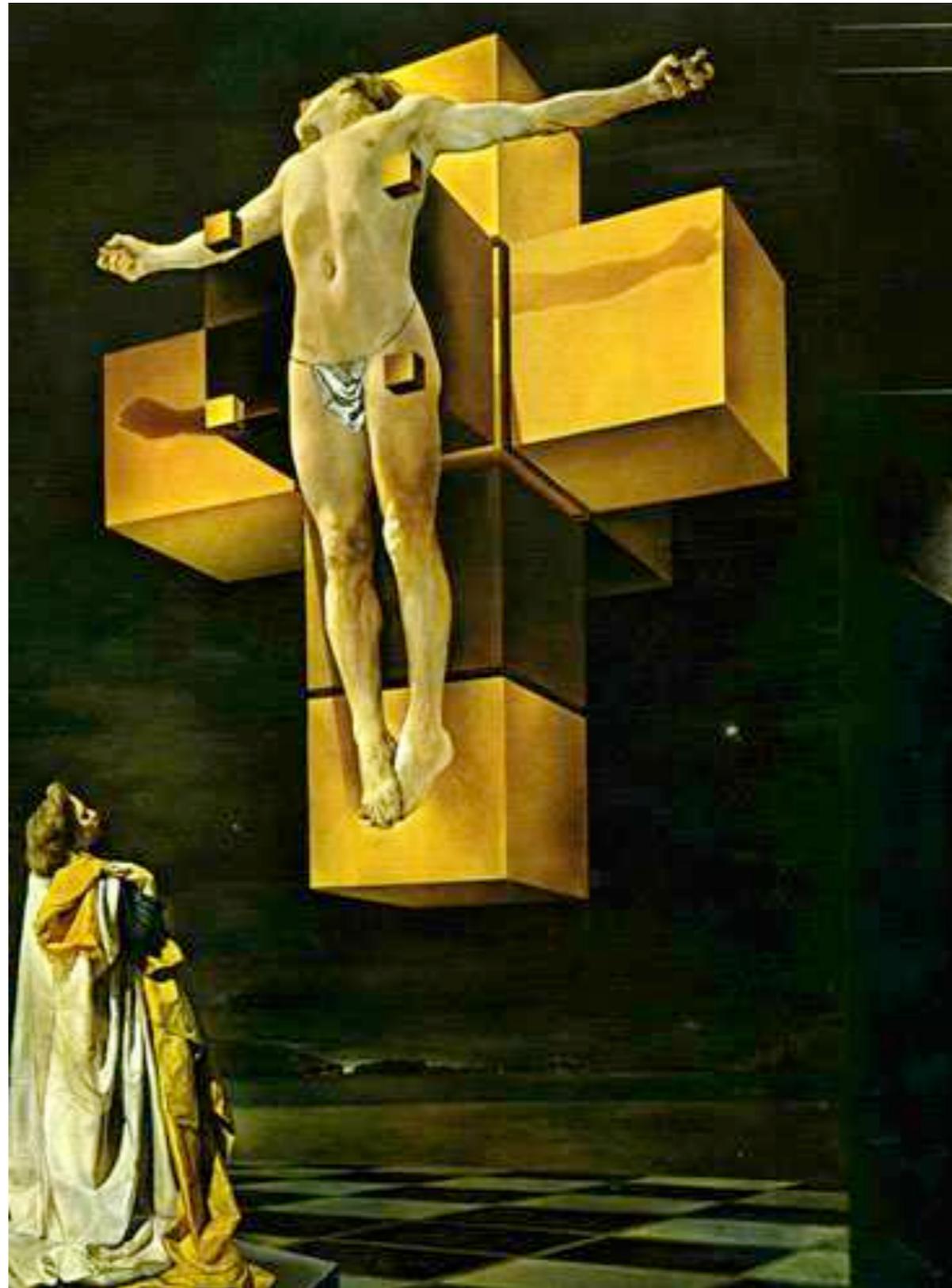
Ludwig Boltzmann
1844-1906



James Clerk Maxwell
1831 - 1879

The variations of the velocities are, at first, developed **majestically: then from one side enter the equations of state:** and from the other side, the equations of motion in a central field. **Ever higher soars the chaos of formulae. Suddenly we hear, as from kettle drums,** the four beats “Put $N = 5$.” The evil spirit V (relative velocity of molecules) vanishes: and, **even as in music a hitherto dominating figure in the bass is suddenly silenced, that which had seemed insuperable has been overcome as if by a stroke of magic...** One result after another follows in quick succession till at last, **as the unexpected climax,** we arrive at the conditions for thermal equilibrium together with the expressions for the transport coefficients. **The curtain then falls!** — Boltzmann on Maxwell’s work on the dynamical theory of gases







If we care
about creativity,

We must provide
opportunities
for play
across disciplines

Foundations

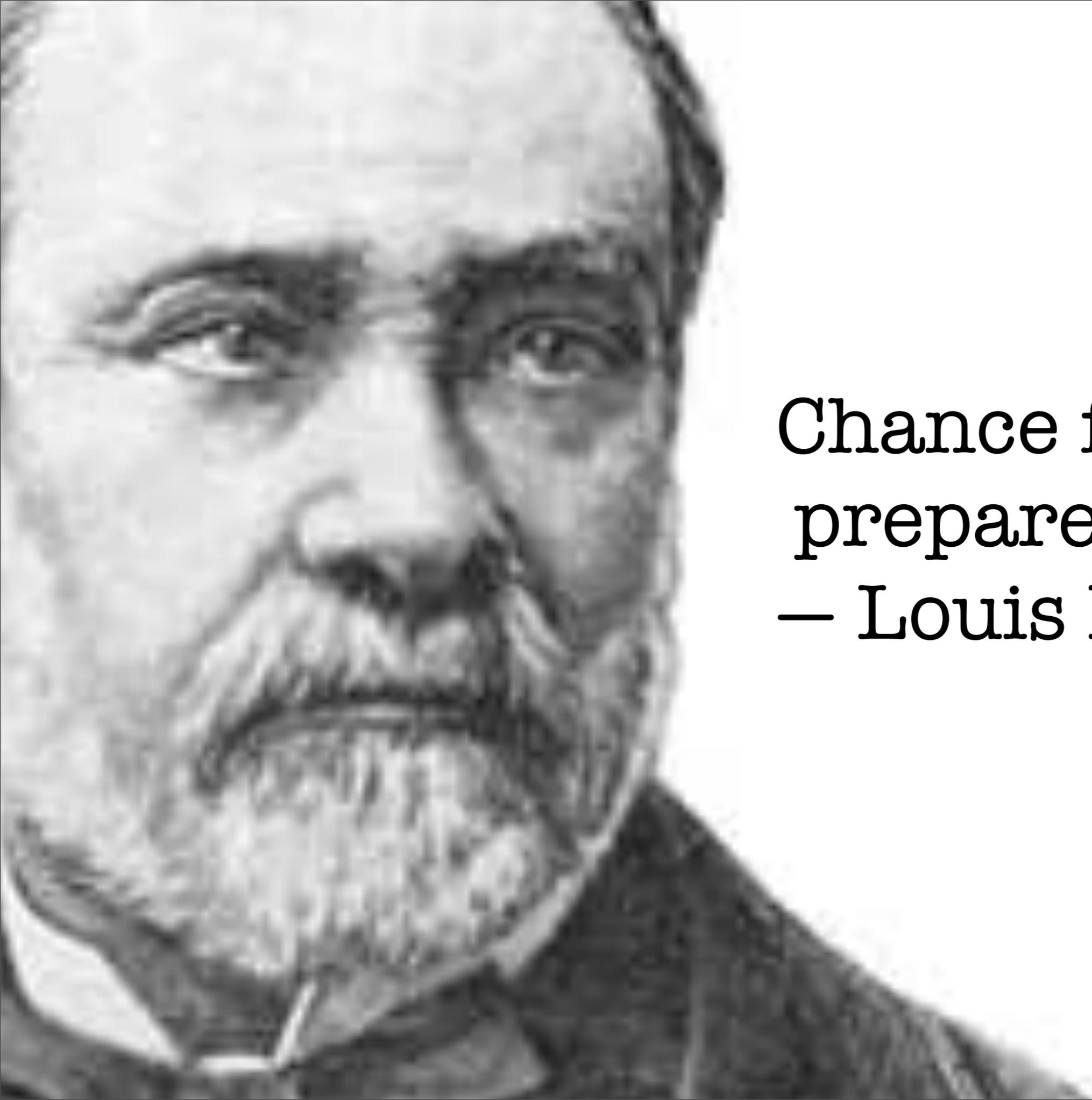
Science



Art

Creativity

Because...



Chance favors a
prepared mind
— Louis Pasteur

A mind prepared for
combinatorial creativity...

Instead...

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The National Center for Fair and Open Testing

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"No Child Left Behind" After Six Years: An Escalating Track Record of Failure

Submitted by fairtest on January 25, 2008 - 5:06pm [fact sheets](#) [fairtest on national](#) [k-12](#) [national](#) [news](#) [whats new](#)

After six years, there is overwhelming evidence that the deeply flawed "No Child Left Behind" law (NCLB) is doing more harm than good in our nation's public schools. NCLB's test-and-punish approach to school reform relies on limited, one-size-fits-all tools that reduce education to little more than test prep. It produces unfair decisions and requires unproven, often irrational "solutions" to complex problems. NCLB is clearly underfunded, but fully funding a bad law is not a solution.

Public recognition of the law's ill effects has produced a growing consensus in favor of a fundamental overhaul. It's time for a new conception of the federal role in education—beyond standards, tests and punishments—in order to strengthen schools and truly leave no child behind.

* NCLB rests on false assumptions—e.g., test scores equal educational quality, and sanctions based on low test scores drive school improvement. As a result, it offers false remedies that are not working. Since NCLB was signed, reading scores on the National Assessment of Educational Progress (NAEP) have stagnated, and the rate of improvement in math has slowed. The neediest children in our nation continue to receive an unequal and inadequate education. In Texas, for example, the "achievement" gap narrowed on the state test but widened on NAEP. The gap was created to

Lansing schools may cut 87 jobs under 5-year contract

Elementary art, music, PE teachers would be eliminated

Mar. 22, 2013 | 19 Comments

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Lansing schools may cut 87 jobs under 5-year contract

Elementary art, music, PE teachers would be eliminated

Mar. 22, 2013 | 19 Comments

Recommend 20 people recommend this.



Lansing School District music teacher Dave Wullaert gives instruction to Gier Park Elementary students on Thursday. Greg DeRuiter/LSJ



Written by Kathleen Lavey

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News

Updates

Lansing teachers and the school board Thursday agreed to a five-year contract that includes a pay freeze, eliminating elementary art, music and physical education teachers and a reduction of teacher planning time.

That could mean cutting as many as 87 staff positions in the 915-

2 St. Johns official charged in embezzlement of more than \$250K from funeral home

3 \$231K in state liens against four restaurants in East Lansing

4 Grand River breaks record levels in state

5 Graham Couch: Improvement visible for MSU football, even as questions on offense remain

Most Viewed



The need for **NEW*** ideas

NO

↓ JOSEPH III

APJ JOSEPH III

Handwritten text in Tamil script: மென்மையான பூக்கள்

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To end...

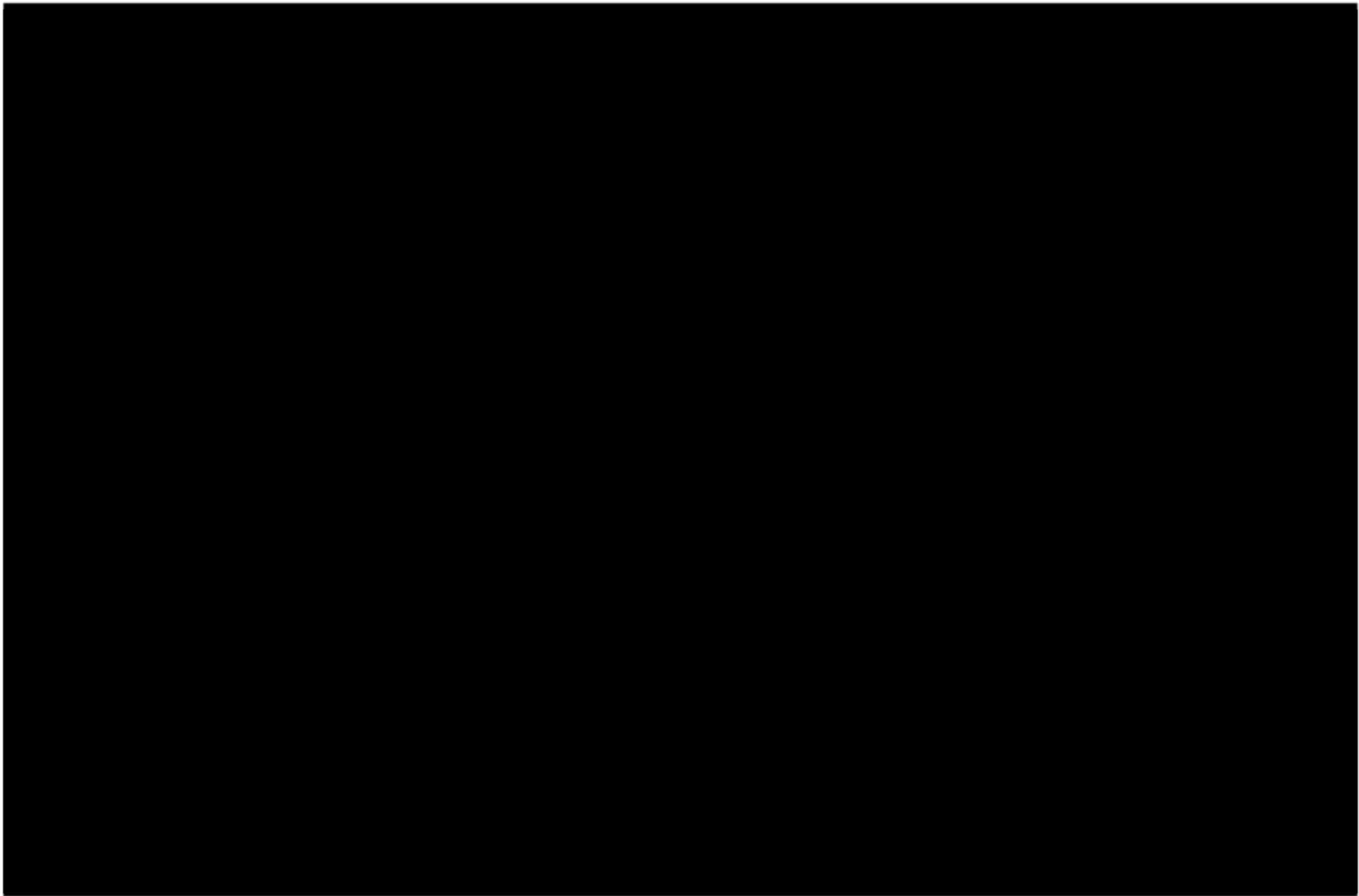
3 words...

3 videos...













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Remember to...

Thanks



Stink Different



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