

Ornaments for the Mind

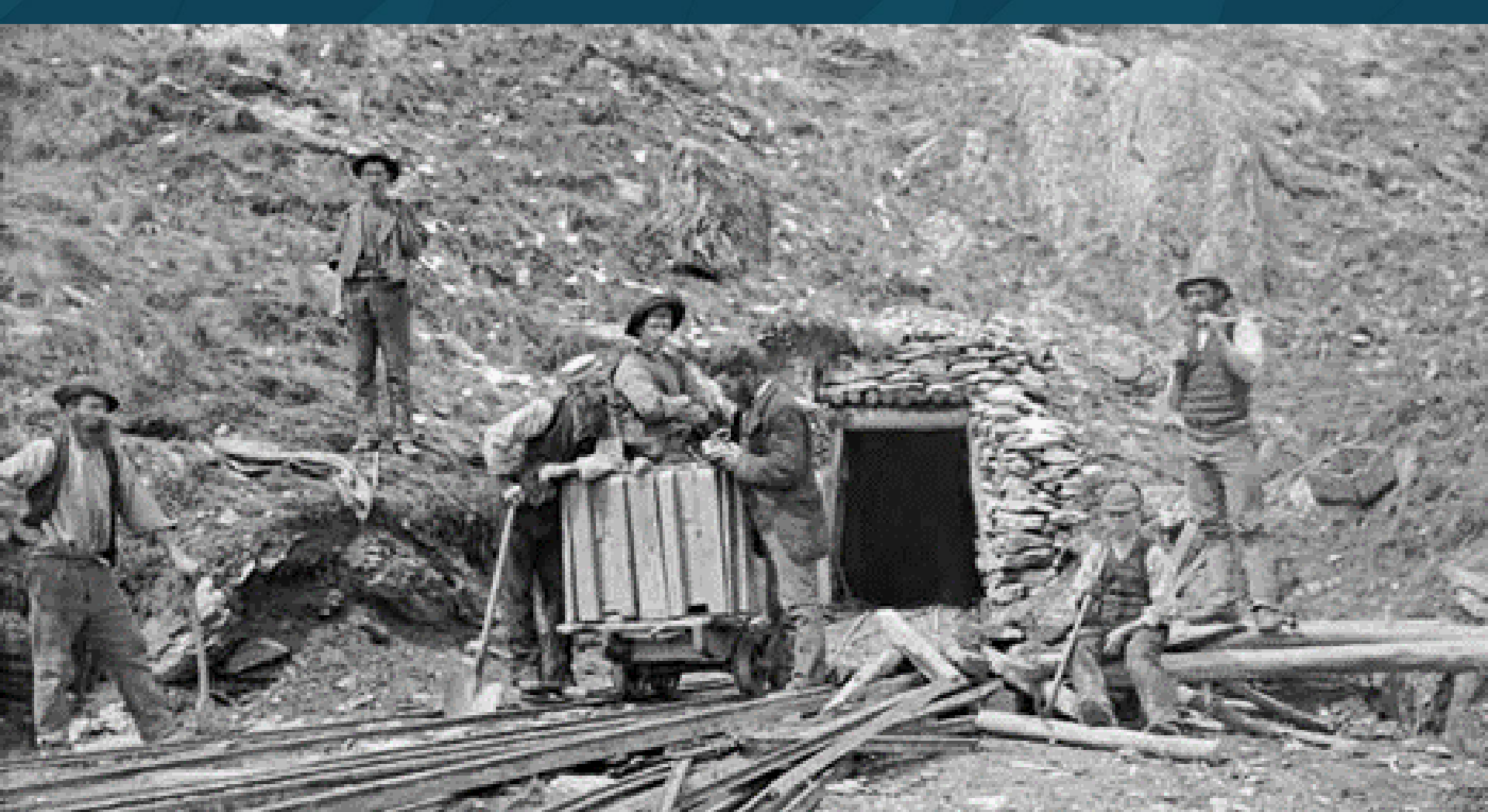
*The Impact of Stories in the Classroom
(sparking curiosity and retention)*

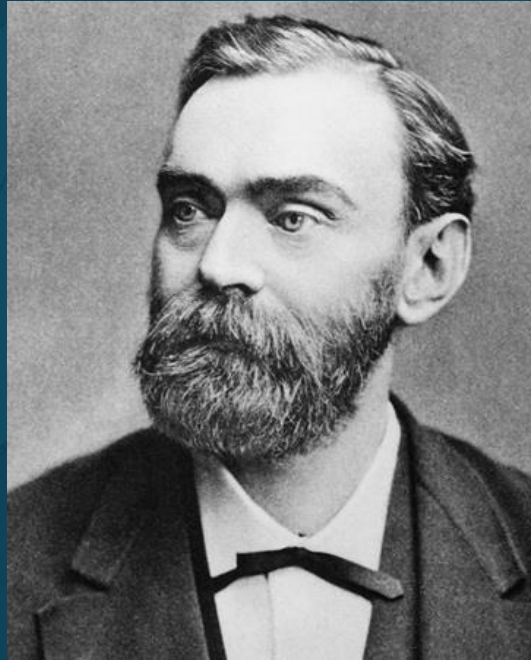
Andy Gerhart, Lawrence Technological University

Nitroglycerin was first synthesized by chemist Ascanio Sobrero in 1847.









Alfred Nobel developed dynamite in 1867 by mixing the nitroglycerin with diatomaceous earth.



The Power of Stories



The Power of Stories



What adventure did you have during Spring Break?

What intriguing thing happened to you in one of your classes this previous academic year?

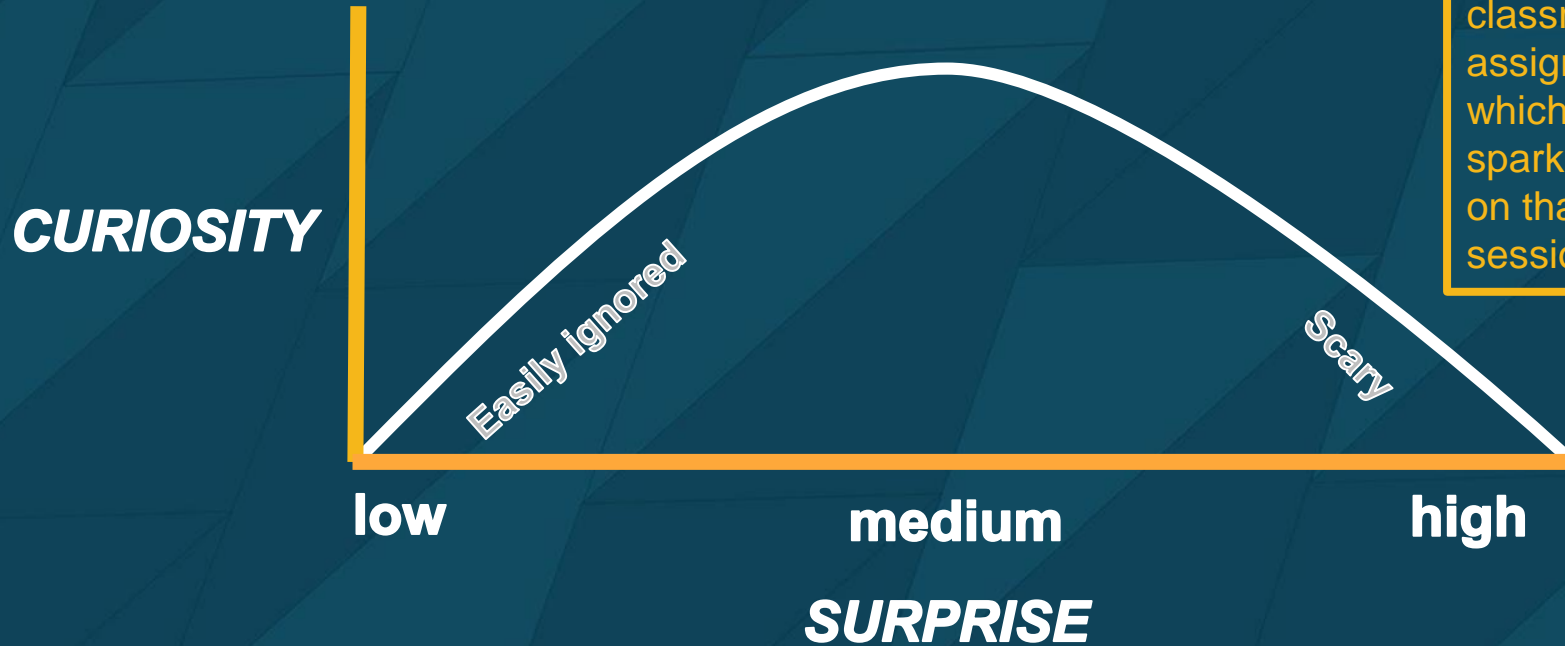
What's the most dramatic event that you recall happening to you?

What's the funniest thing you ever experienced?

What key features made the story great or maybe just memorable?

Now...why/how might storytelling be useful in the classroom?

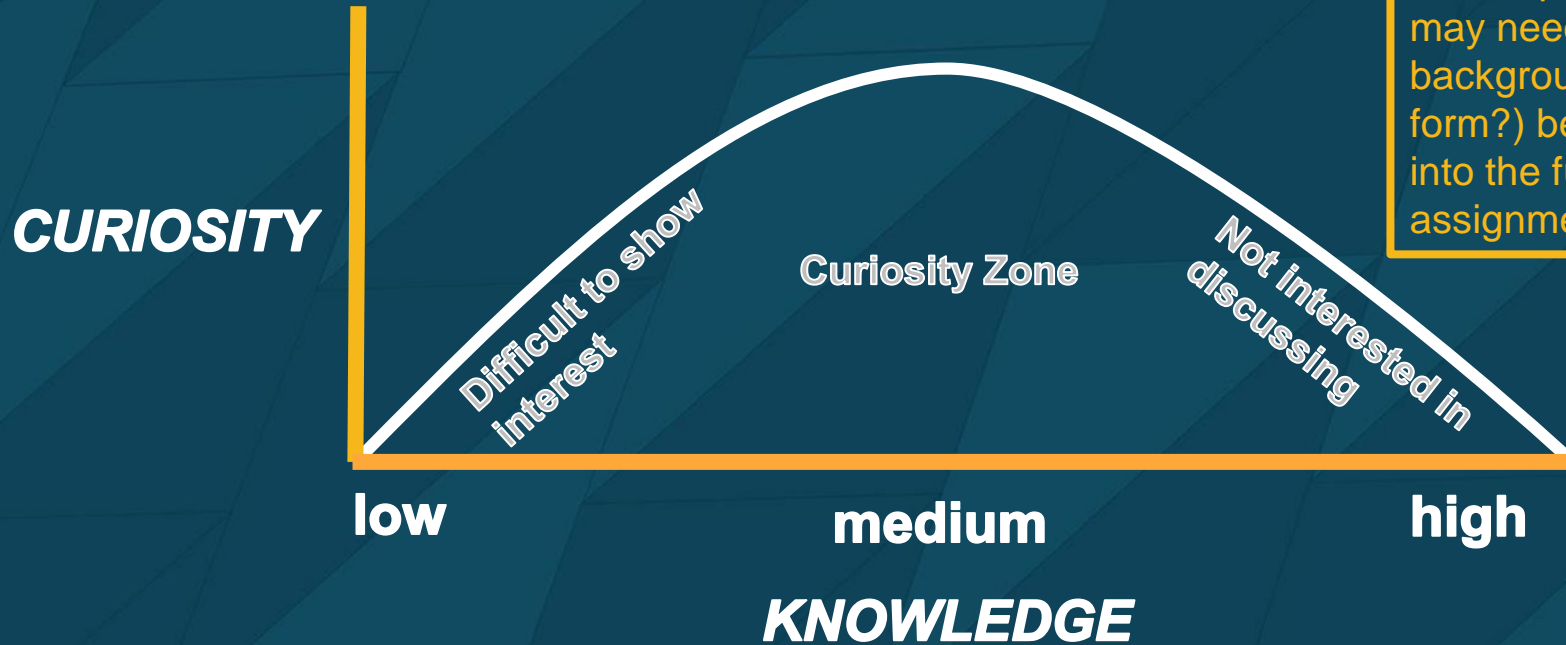
Incongruity Theory



This implies that stories or “hook statements” can be the key to a classroom assignment for which you want to spark curiosity. More on that in my next session.

The Information Gap...

“knowing just enough to get you into trouble”



This implies that you may need to add some background (in story form?) before digging into the full-on assignment.

Lesson from TED



How much are students retaining?



What percentage of important concepts are students retaining 5 years later ?

~ 2 %

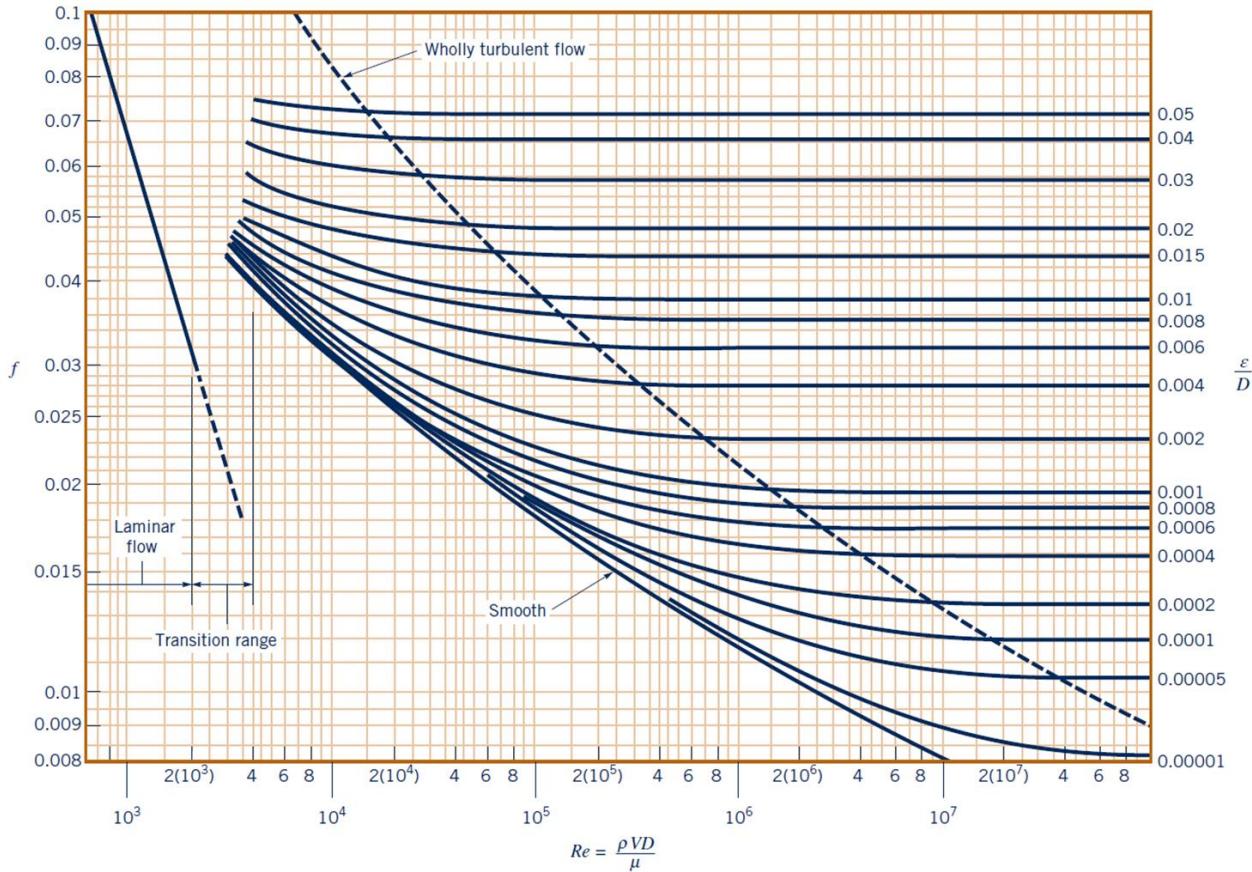
Lesson from TED

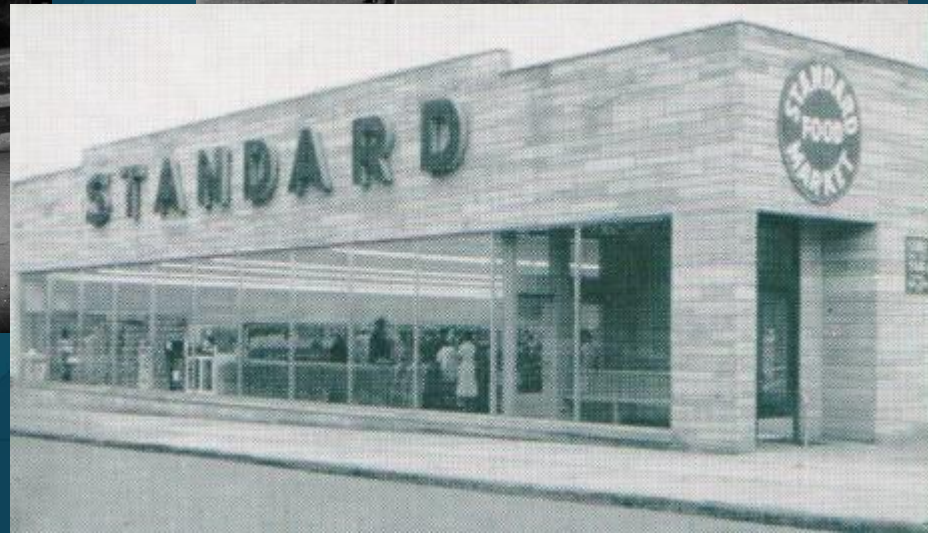


Centrifugal Coffee



The Tales of two Johanns







The shopping cart - 1936



Sylvan Goldman



Customer views – Overcoming the “value barrier”



Women - “I have been pushing enough baby carriages. I don’t want to push any more.”

Men – “With my big strong arm can’t I carry a darn little basket like that?”

Surprise/drama

Humanizing

Humor

Further information

M.C. Green, (2004) “Storytelling in Teaching,” *Association for Psychological Science, Observer*, April.

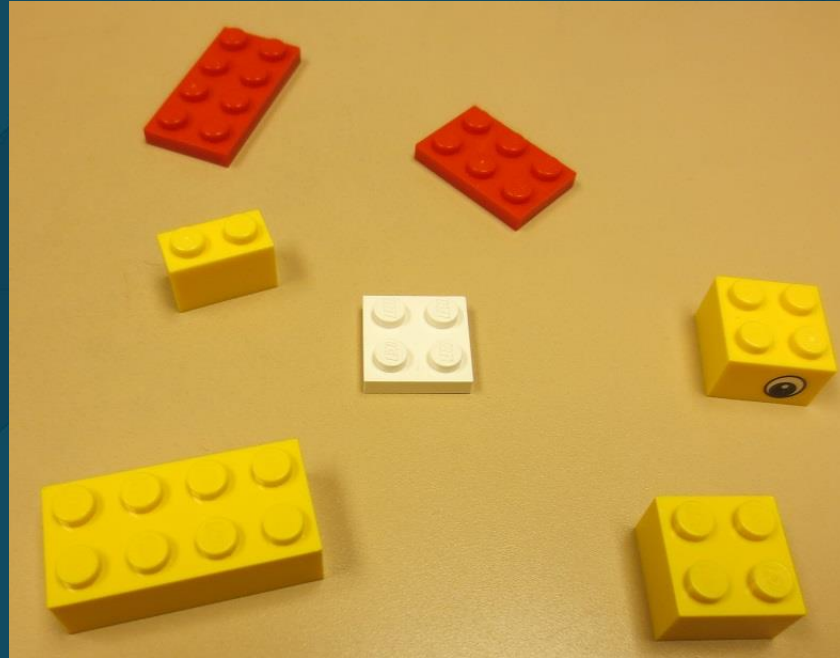
<https://www.psychologicalscience.org/observer/storytelling-in-teaching>

Storytelling of the students, by the students,
for the students...

Andy Gerhart, Lawrence Technological University

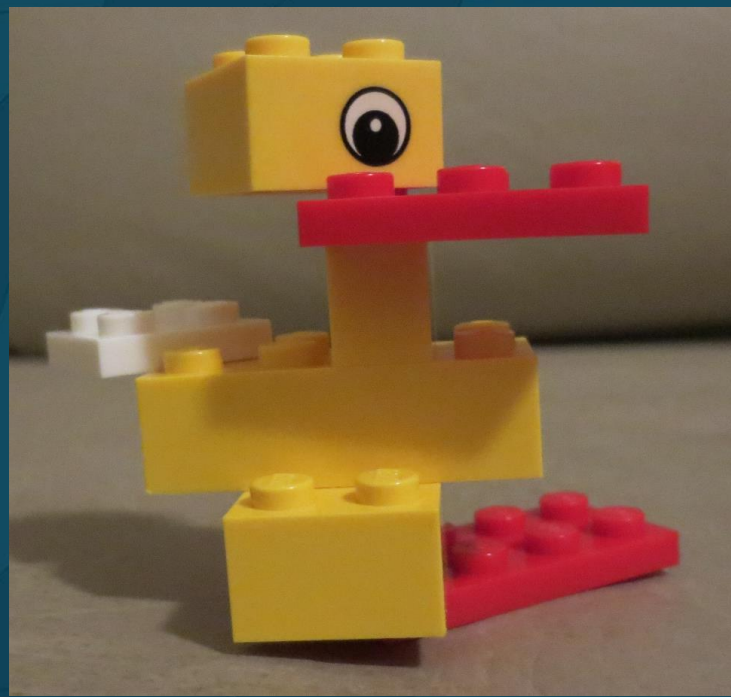


Build a Duck

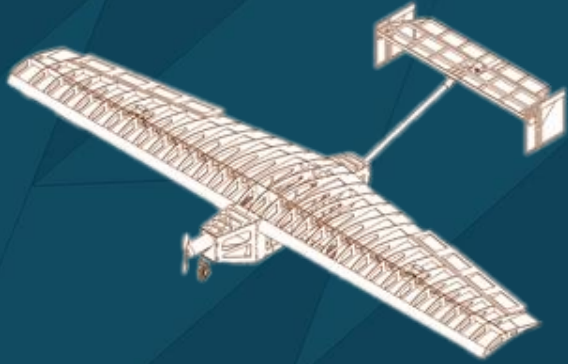


What did you create?

Picasso version



To effectively use stories, you will need:



relevance to content



passion

**a keen sense of
the audience**



May I have your attention, please



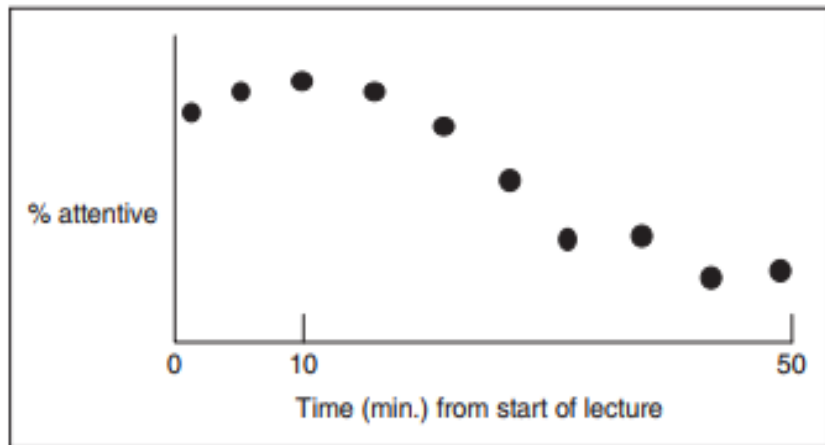


Figure 6.3-1: Attentiveness versus Time in Lecture—No Activities

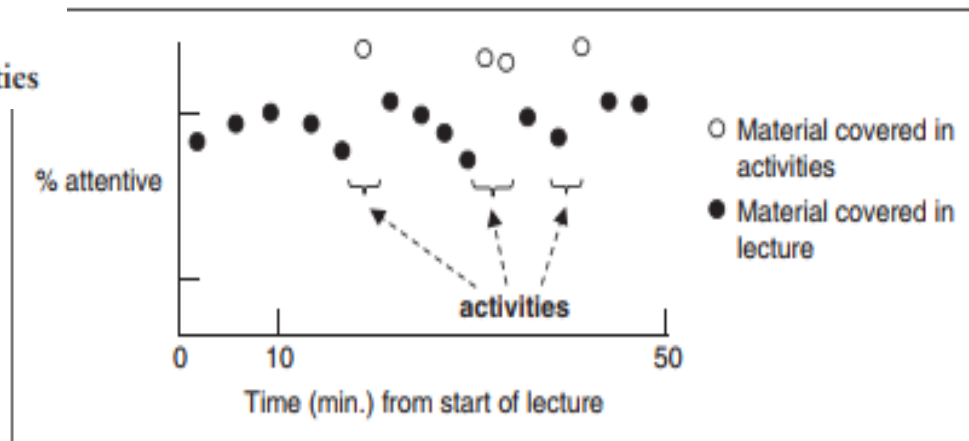
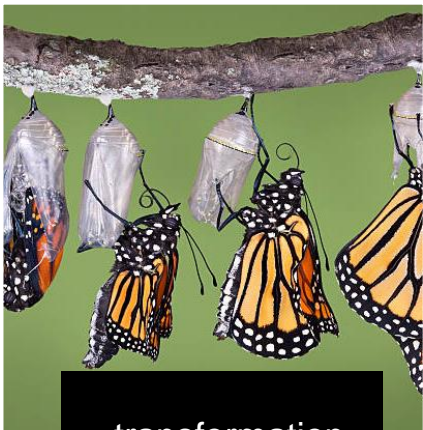
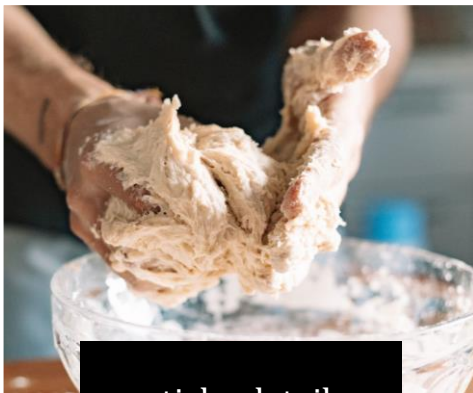


Figure 6.3-2: Attentiveness versus Time in Lecture—Activities Interspersed



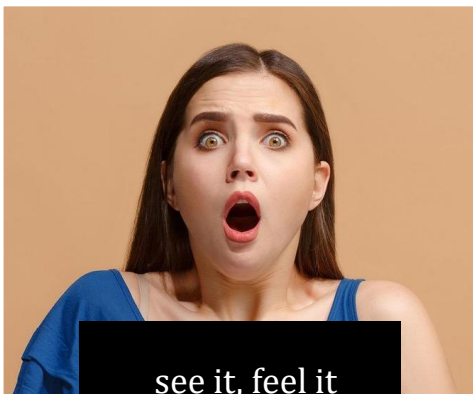
transformation



sticky details



land the plane



see it, feel it

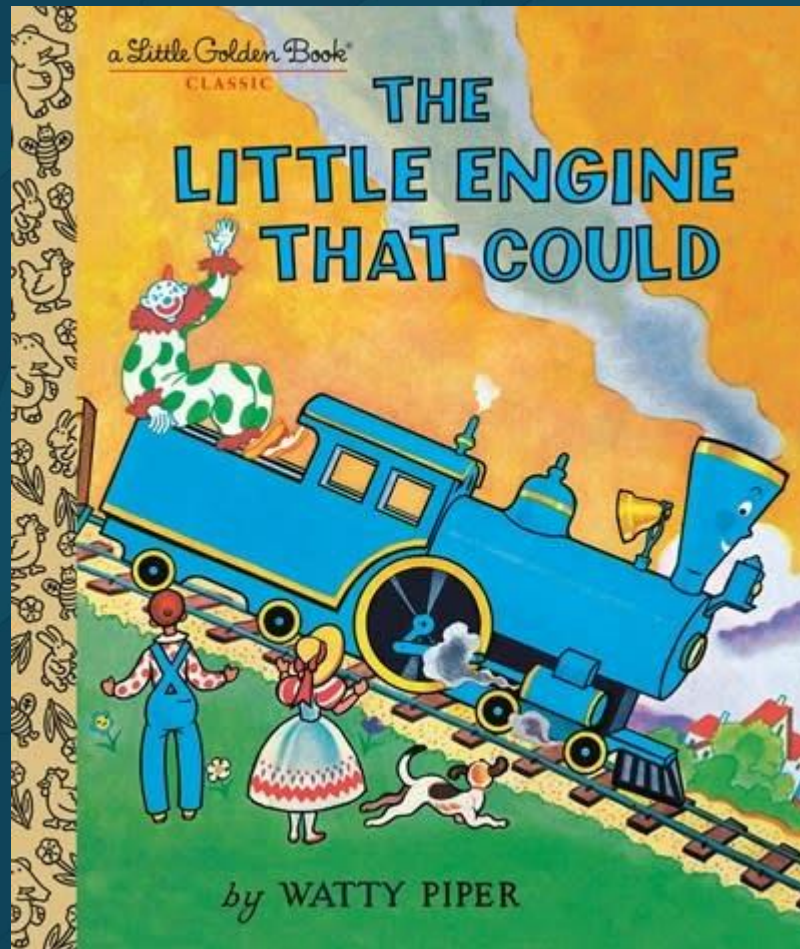


last sentence first

**STORY
TELLING
STRATEGIES***

*Developed by Janece Shaffer, borrowed from KEEN on Stories curriculum

Crafting Your Story



In one short sentence, what is your story about? (Think Golden Book...)

Crafting Your Story

What makes the story significant? When will you share this story?

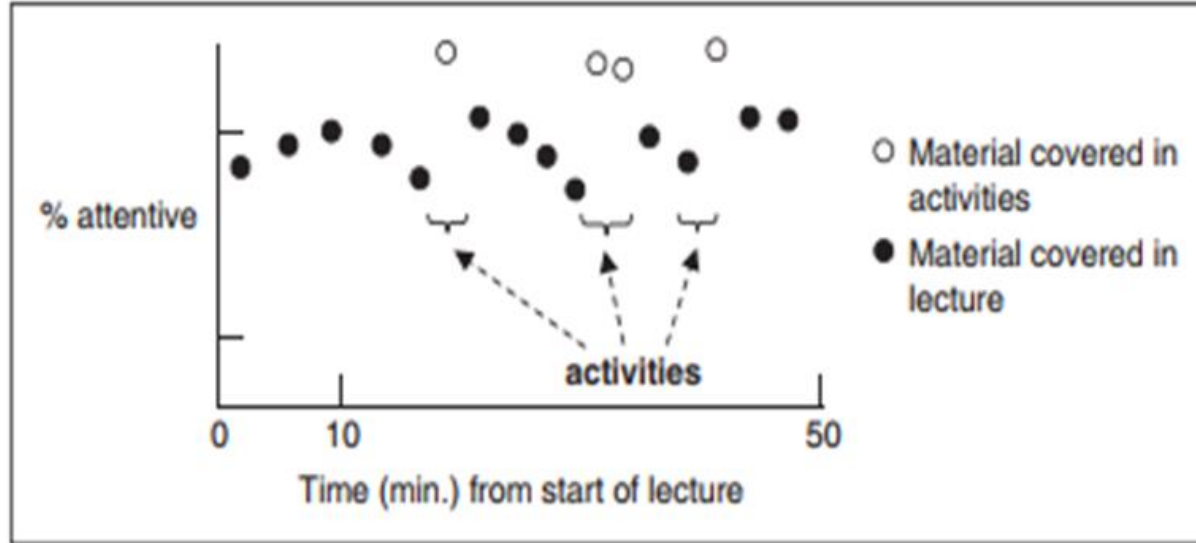


Figure 6.3-2: Attentiveness versus Time in Lecture—Activities Interspersed



Crafting Your Story

THE SIXTH SENSE

How will you conclude your story? Write your final sentence.

Crafting Your Story

With the ending in mind, how might you open your story to create the most compelling dramatic arc? Write your opening sentence.



Crafting Your Story

What are two sticky details you could include? Don't forget to think full sensory...



Crafting Your Story

Is there an emotional component to your story? What are you feeling and where in your story will you cue the audience on your emotions?



Pointers



Make a note...then put them in your notes

Watch and listen to Master Storytellers (pacing, pauses, voice)

...then develop your own style that draws on experts but fits your personality

Involve your students (perhaps not directly)

Solicit student feedback

Was it interesting? Was it useful? At end of class, ask them to summarize the point.

Pitfalls



Think (3 minutes)

Pair

Share

Pitfalls



Your classes become your autobiography

Stories that will come back to haunt you later

Losing the point you are trying to make

...or students don't recognize the key point

Class Time

Mocking or disparaging a student

Choose your own Adventure

Types

- Drama
- Suspense
- Humor

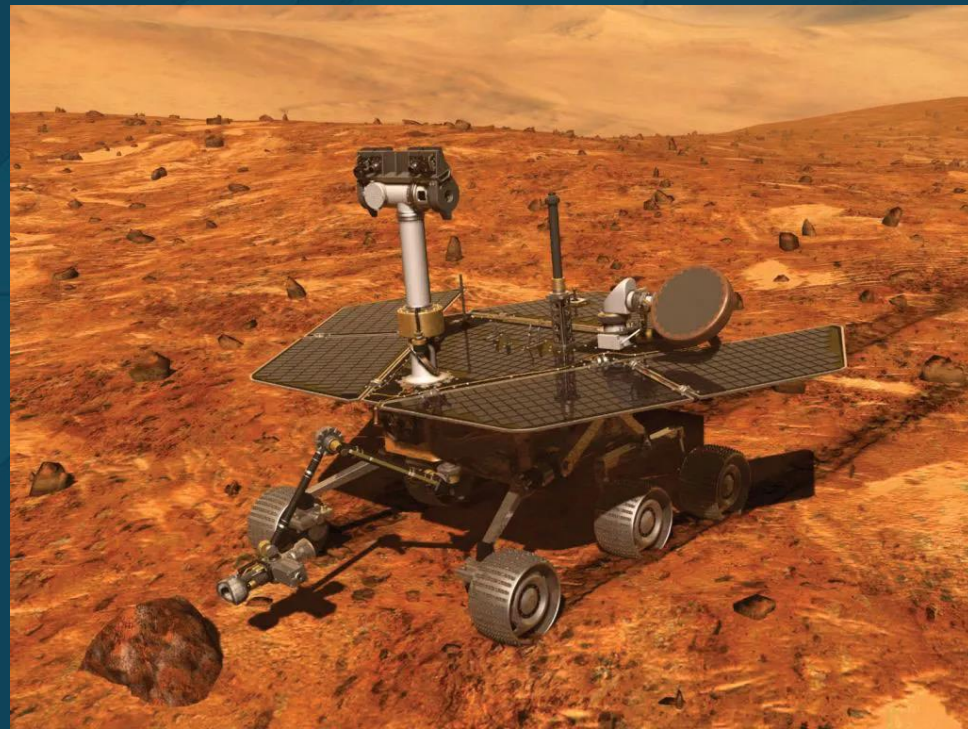
Genres

- Create Interest
 - Humanize a topic
 - Story of the research or theory development
 - Application
- Tales of a previous student
- Autobiographical
- Common experiences
- Break-up a lecture with a completely off-topic story

Delivery

- Instructor
 - Spoken
 - Illustrated
 - Video
 - Websites
- Student
 - Case study
 - Role play
 - Personal experience

Packaging



Here is a six and a half minute video showcasing how packaging plays a prominent role in engineering. The Mars Rover, Spirit, alone is worth \$400,000,000. Delivery of Spirit to Mars was another \$400,000,000. The total for the entire program was \$2,000,000,000. Makes the value of the Fabergé eggs seem insignificant.

<http://www.youtube.com/embed/XRCIzZHpfY?rel=0>

Using a photo to tell
the story.
Apartment Pool



Town Hall Meeting



In-class activity

You will each be assigned a role from the list of stakeholders:

- Mayor*
- Nanopackaging Solutions Company Representative*
- Unemployed steel mill worker of East Falls
- Local University Research Scientist from East Falls
- Environmentalist at the Eco Footprint Foundation
- East Falls Concerned Parent

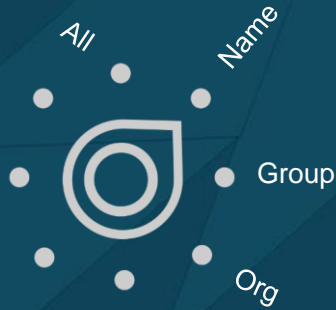
- Assemble according to your role (mayors, environmentalists, etc...) into **EXPERT GROUPS**
 - Each **EXPERT GROUP** read through your background material and prepare for Town Hall meeting
 - Prepare your opening statements/questions/arguments for either a **YES VOTE** (in favor of tax abatements) or a **NO VOTE** (against offering these incentives) - 30 minutes
- Select a spokesman/woman to represent your **EXPERT GROUP**.
 - a. PANEL: (All in EXPERT GROUP) assemble at the front of the room.
 - b. AUDIENCE (All in EXPERT GROUPS seated together) facing the PANEL.
- Begin Town Hall meeting with opening remarks
 1. Mayor
 2. NanoPackaging Solutions Company Representative
 3. University Researcher
- After opening remarks, take questions from AUDIENCE.

Stories from dreams



Story Equalizer

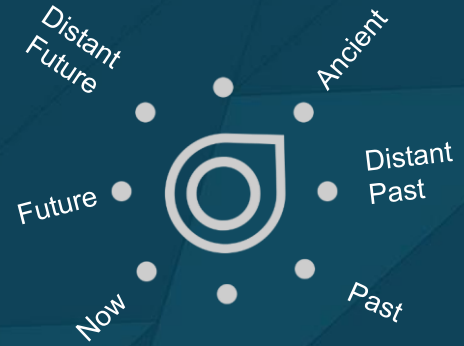
Who



Where



When



Why

Tension in the Story

You will be able to ___(learning objective)___

How & What

Task

Time

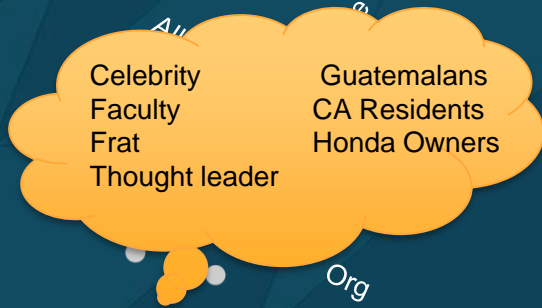
Team

Target

Technique

Story Equalizer

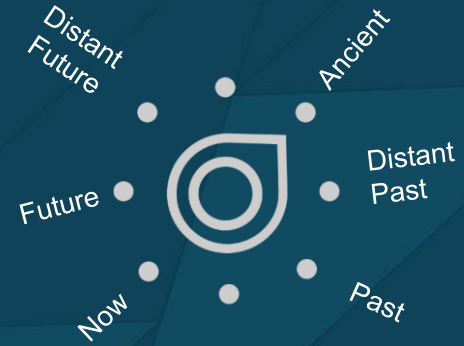
Who



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When



Why

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You will be able to ___(learning objective)___

How & What

Task
Time
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Target
Technique

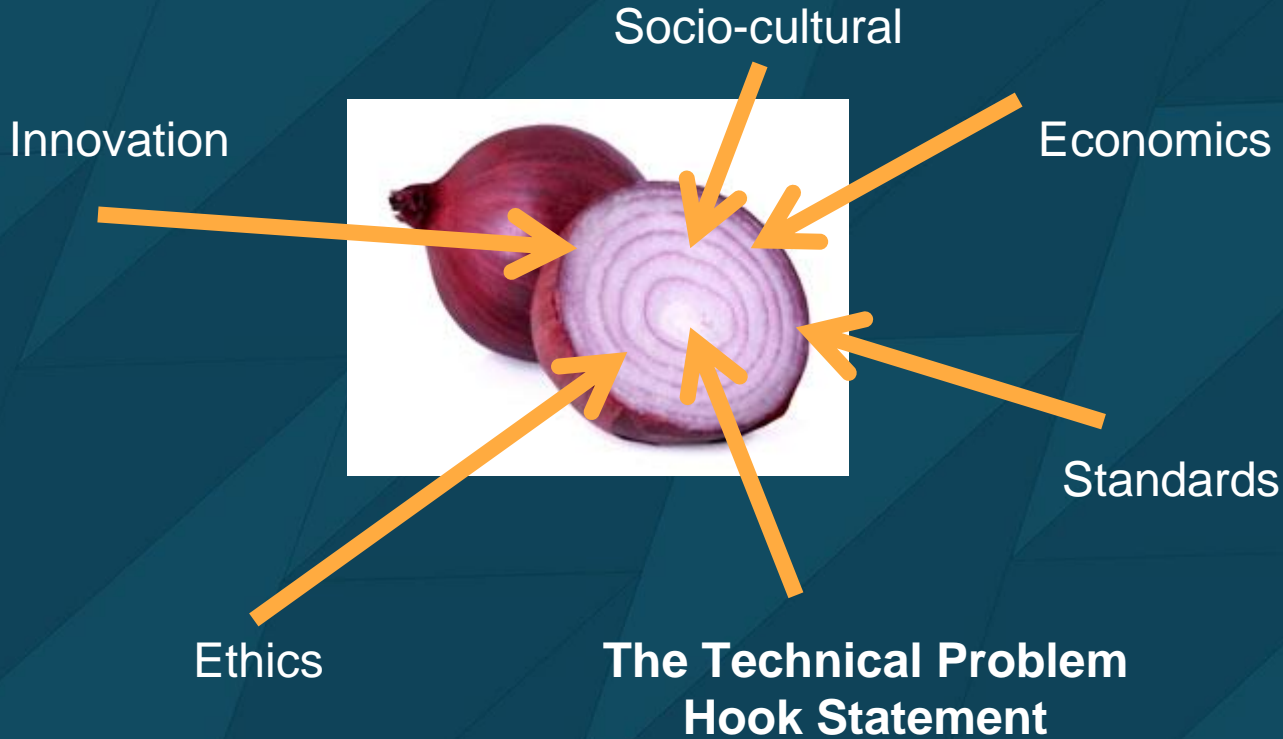
Hook Story



Mort lives on (and on and on)

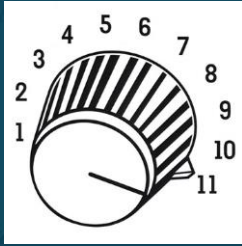


Add in Some Flavor

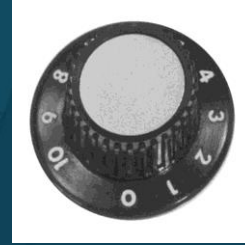


A word or phrase can add context

How and What



Support



Scope

Task
Time
Technique
Team
Target

The 5 T's

TBP 2 SBL (or PBL)

- Take 15 minutes to turn a textbook problem into a story
- Think about what will be a hook that will resonate with students
- Use the story equalizer to help you
- Focus (for now) on who, where, and when

Further information

M.C. Green, (2004) “Storytelling in Teaching,” *Association for Psychological Science, Observer*, April.

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