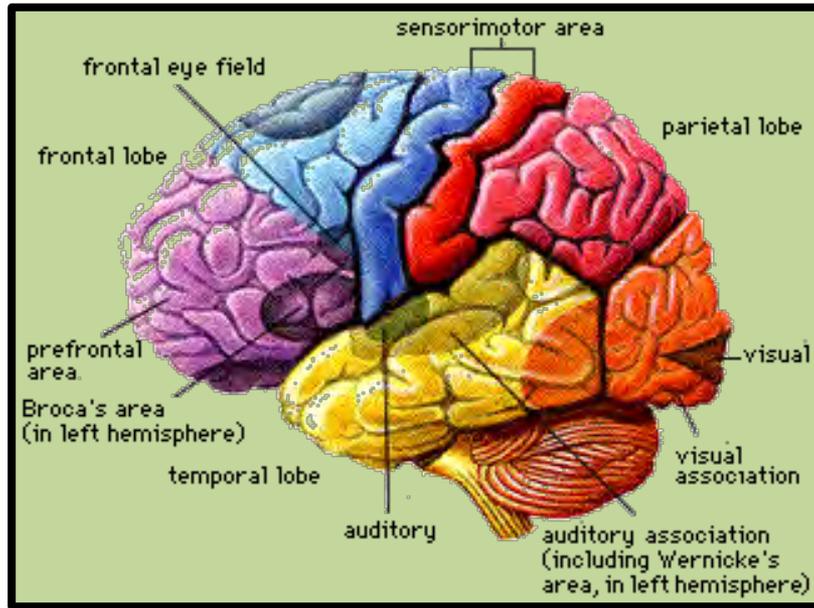


Funny: Why & How

Using Humor As a Tool To Enhance STEM Education

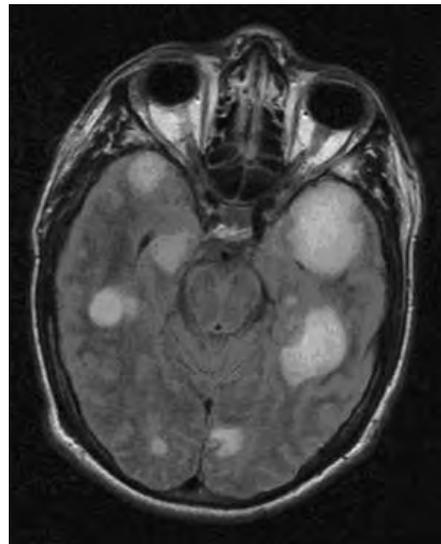
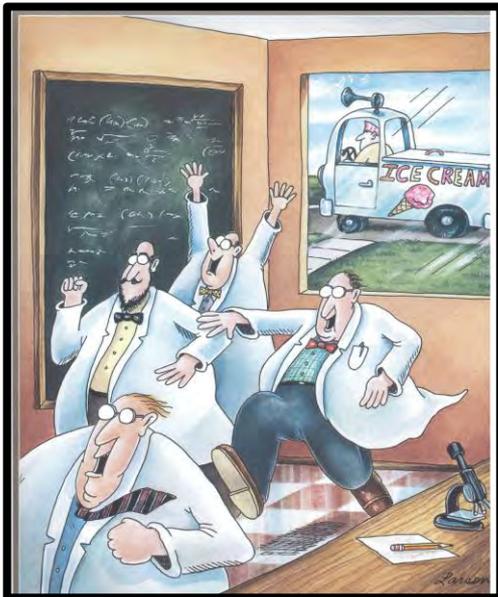


This is Your Brain on Humor:

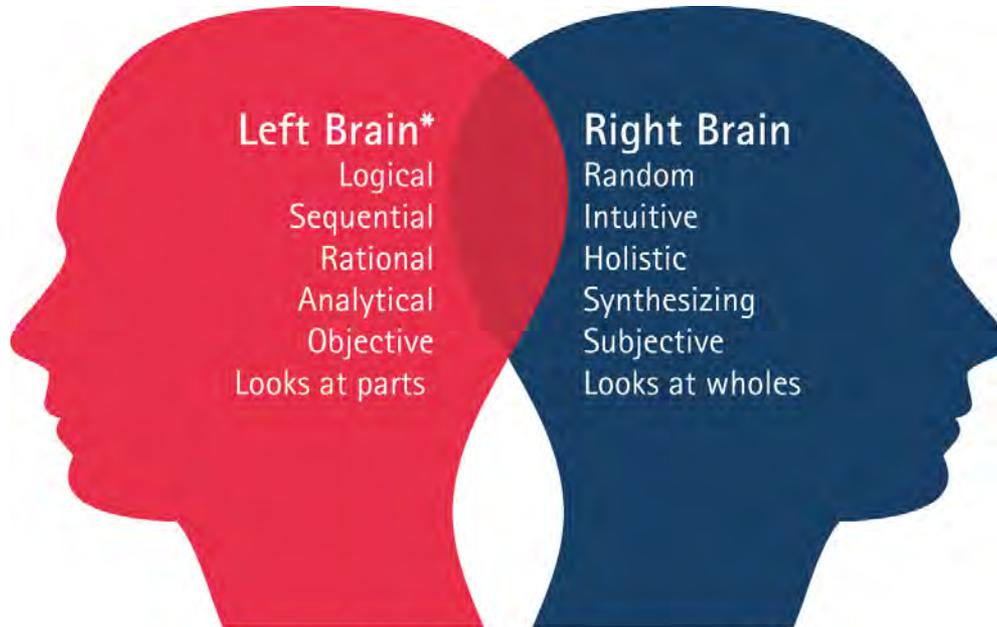


How is humor studied?

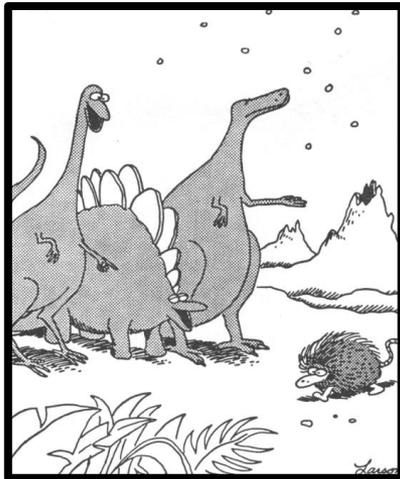
- MRIs of healthy brains with various styles of humorous vs. non-humorous stimuli
- Comparisons between healthy brains and brains with lesions & deficiencies in certain areas
- Long-term observation of various animals' use of humor, uncovering evolutionary origins of humor and modern functions



This is Your Brain on Humor:



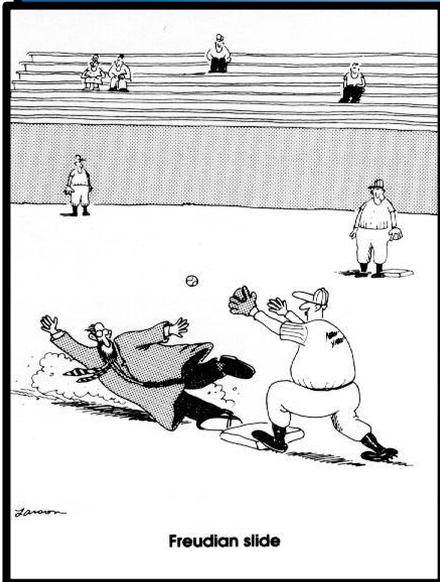
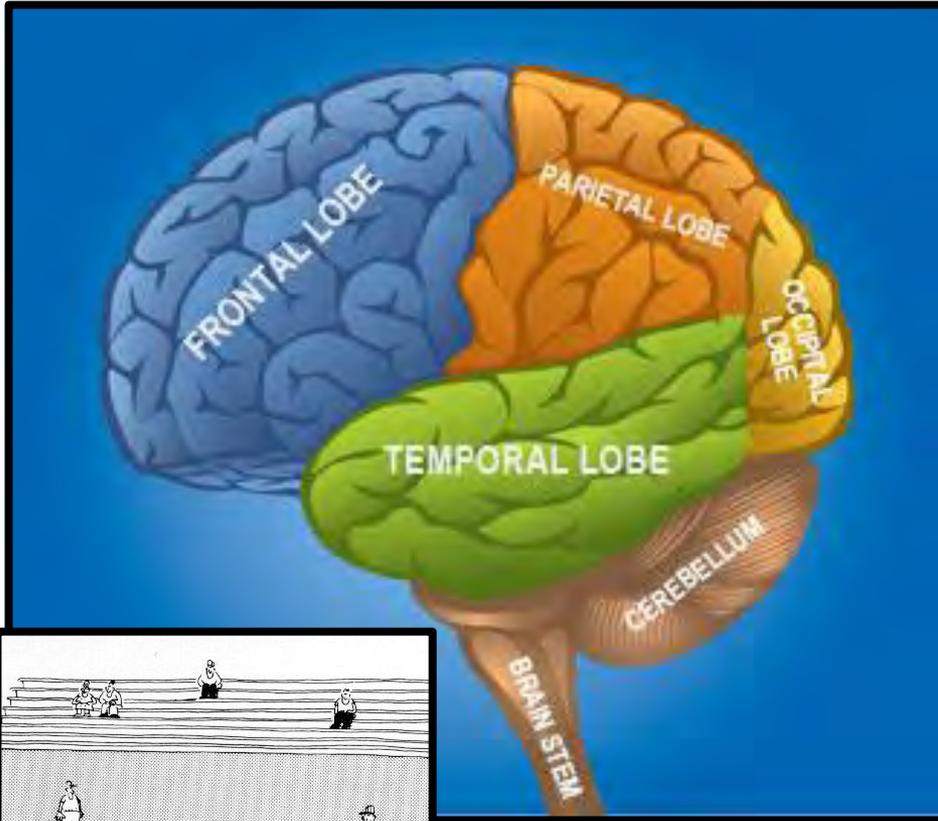
*Source: Funderstanding.com, Inc., New Jersey



Results of Humor Studies:

1. *Right vs. Left hemisphere*
 - The right brain interprets where humor fits into the greater, global picture.
 - Damage to the right hemisphere shows more humor impairment.
 - Interpreting humor within the context of STEM forces the brain hemispheres to work together

This is Your Brain on Humor:



Results of Recent Humor Studies:

- People with damage to the prefrontal cortex* have a notable inability to interpret humor of all kinds.
 - **Prefrontal Cortex* controls:
 - ability to focus on multi-step tasks
 - cognitive flexibility
 - incorporation of emotional behavior
 - semantic memory retrieval
 - episodic & working memory
 - other higher-order thinking tasks.
- Humor requires neural pathways connected specifically to problem solving & memory retrieval to be reinforced and strengthened.
- Studies are currently being conducted to test the connection of humor in STEM teaching + memory retrieval of STEM content.

This is Your Brain on Humor:

Why did humor develop?

- *Charles Darwin:* Humor must have an evolutionary significance
- *Geoffrey Miller:* Humor exists as a mechanism for sexual selection



- *Suslov:* Humor has a purely biological origin:

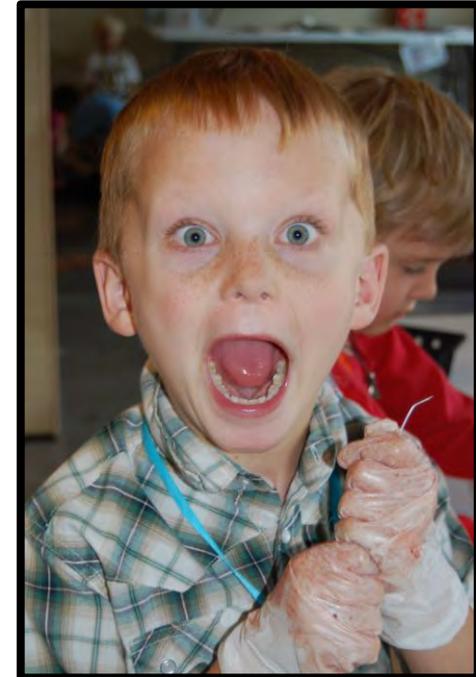
"[Humor as a] biological function consists of quickening the transmission of the processed information into consciousness and in a more effective use of brain resources."

- *Hurley et al:* Humor exists as a mechanism for developing superior problem solving skills

Reasons to Use Humor in Teaching STEM that you have probably already thought of:



1. Kids Are Naturally Funny.



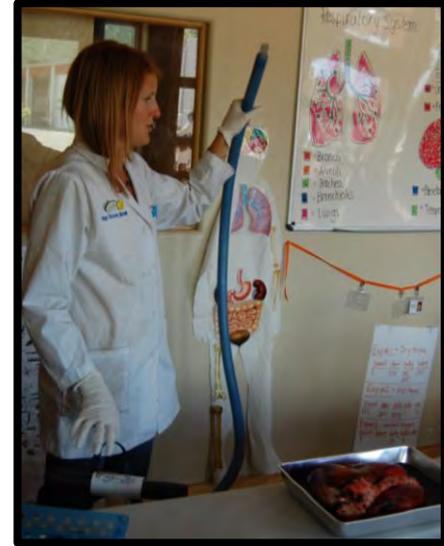
Reasons to Use Humor in Teaching STEM that you have probably already thought of:



2. Kids Are Awesomely Awkward.



Reasons to Use Humor in Teaching STEM that you have probably already thought of:

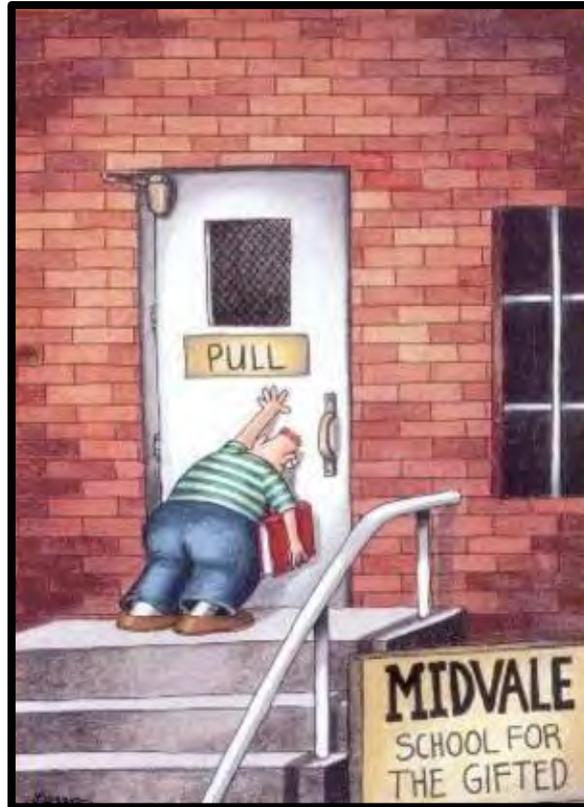


3. Kids Like Inclusion



Funny: ~~Why~~ & How

“Humor in the classroom is most effective when linked to concepts being studied. Humor for the sake of humor might make you a “cooler” teacher in the eyes of some students, but humor that educates will help you become a more effective instructor for all students.”



“You need to find an application of humor that fits who you are. Pick and choose what might seem appropriate for your teaching style.”

Powers, Ted. (2005). Engaging Students With Humor. *Psychological Science*, December

“Most professors think like professors, and you can’t do that. What I do and how I teach is all about the students. It has nothing to do with me. I’m tapping into their multiple intelligence needs and their culture so that they can understand the material in their terms.”

Hire Crazy Staff



We work hard & take *our mission* very seriously.

We do not, however, tend to take *ourselves* very seriously.



Costumes:

Wear them all year round!

If instructors can laugh at themselves, kids seem less afraid to look silly, make mistakes, take chances, and dive in to science!



Making Scary Stuff Less Scary

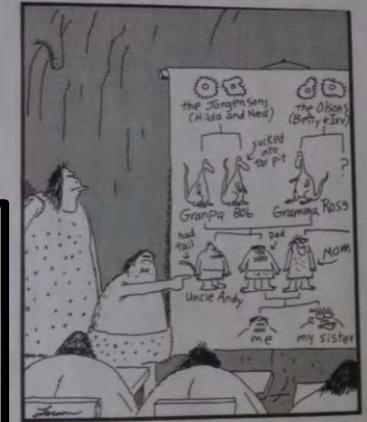
“Some teachers find no place for humor in testing because, for example, they believe it may be distracting to students. I am not one of them. I believe a humorous item or two can relax students and help ease test anxiety and improve performance.” –Ted Powers, *Engaging Kids with Science*.

Genetics Quiz II : Enviro-Bio

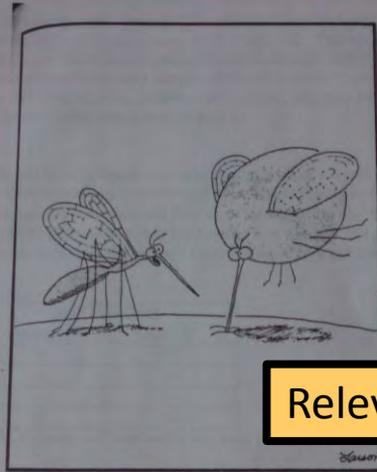


Name: _____

Environmental Biology Test #2
Pedigrees, Concordance, BOF 7-12



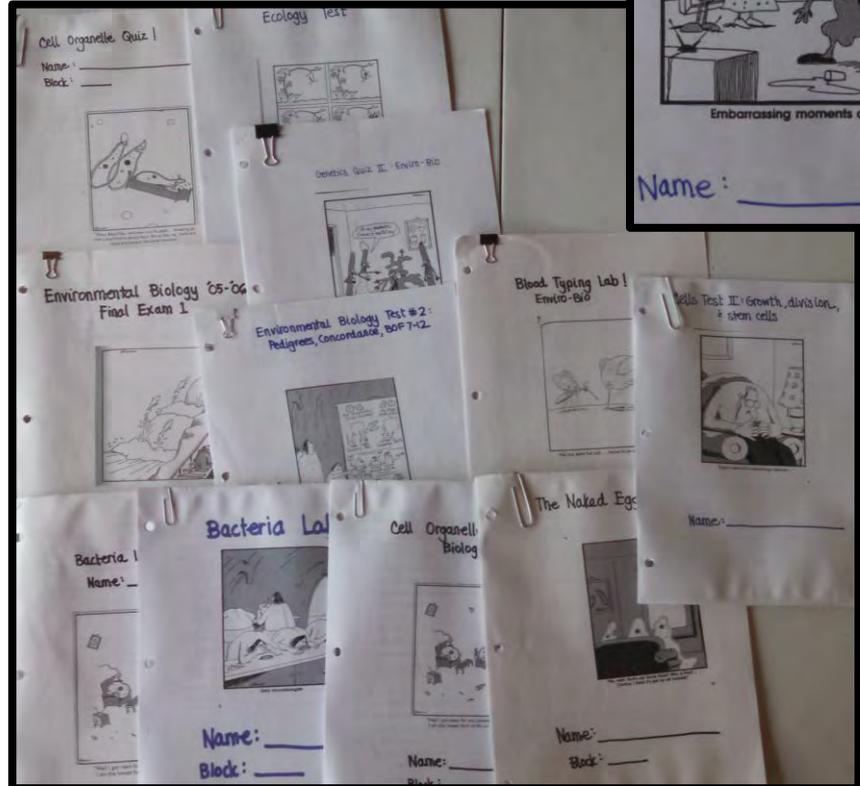
Blood Typing Lab!
Enviro-Bio



"Pull out, Betty! Pull out! ... You've hit an artery!"

Name: _____

Relevant Comic Test Covers



Mad Props

“Dinner,”
the shrieking
rubber chicken



Cool Guy Egg Baby



Darwin Finger Puppet



Life-Size Newton



Ellie the E. Coli

“Naming inanimate
objects is funny.”
–Jen Lokey

Resources Used:

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