Samwise: "What's your password?" Pippin: "342760575891993352" Samwise: "????"

Pippin:



### Transcending rationality.







10<sup>6</sup> aches = 1 megahurtz



Yeah but at least people thousands of years from now will appreciate the effort and skill it took to build these pyramids.

#### Aliens definitely built these.

This is murder.

EATLIVER.COM

# TRIED TO MAKE GOOD BIRTHDAY CHEMISTRY JOKE

## BUT ALL THE GOOD ONES ARGON



#### UK: Metric System Canada: Metric System South America: Metric System Europe: Metric System Russia: Metric System China: Metric System Japan: Metric System Australia: Metric System Africa: Metric System

## USA:



Jerusalem Post www.jpost.com

Asteroid the size of 18 walruses to pass Earth on Sunday - NASA

1 day ago — An asteroid the size of around 18 walruses is set to pass by the Earth on Sunday, May 21, according to NASA's asteroid tracker.



i





## I poured root beer into a squared glass

Now I just have beer.



This is a cicada. It's in order Hemiptera (true bugs).

This is a beetle. It's in order Coleoptera. It is not a "bug."

Bugs have four membranous wings.

Beetles' front wings are hardened into "wing cases" (elytra).

## Please stop irritating invertebrate zoologists like me by calling beetles "bugs!"

- M. E. Kabay



"Oh, it definitely proves something, all right ...When it comes to actual equations, at least one cartoonist doesn't know squat."



## Censorship should not be obvious.



Moore, 2008). In addition, the hypothalamus serves as a vital link between the brain and the endocrine system (a network of hormone-producing glands, discussed later in this chapter).

The hypothalamus plays a major role in the regulation of basic biological drives related to survival, including the so-called "four Fs": fighting, fleeing, feeding, and mating. For example, when researchers

Weiten, W. (2021). *Psychology: Themes and Variations, 11th Edition.* Cengage Learning. ISBN 978-0357374825. 752 pp. < https://tinyurl.com/2dusnmcs > ©2023 Harry Bliss. Distributed by Tribune Content Agency, LLC All Rights Reserved





## New York is adapting to climate change.





My 4-year old says, "daddy - those bugs are giving a piggyback ride!". Slightly embarrassed I decided she was old enough for 'the talk.' I sit her down and say, "Pumpkin - those are beetles, not bugs."

If you aren't talking to your kids about entomology, who is?



12/27/90





#### CONDUCTOR



### SEMICONDUCTOR



#### SUPERCONDUCTOR



Figure 1. Correlation between Countries' Annual Per Capita Chocolate Consumption and the Number of Nobel Laureates per 10 Million Population.



Sixty-five million years ago, when cows ruled the Earth



I'm starting a DNA-analysis company for Indiana residents called "Hoosier Daddy". This is the most dangerous animal in the world. It is responsible for MILLIONS of deaths every year. By its side, a great white shark swims peacefully.



Sentient Quantum Computers Resolving Statistically Weighted Matrix Solutions in Resonant Transdimensional Vector Sum Probability Flow Analysis







Early experiments in transportation technology.



## Einstein discovers that time is actually money.



### "What exactly is a genetic engineer?"





Coffee with cream and/or sugar

Coffee beverages in 1996

Cappuccino Latte Single Latte Double Latte Triple Espresso Single Espresso Double Gibraltar Café au lait Café con leche Americano Caffe tobio Affogato Mocha Caffe Corretto

Frappe Frappuccino Pocillo Espressino Flat white Café misto Half-caf Melange Ristretto Skinny Latte Soy/Almond latte Chai Latte Ice coffee French press Marocchino

Coffee beverages in 2014

(c) Mikael Wulff & Anders Morgenthaler

#### truthfacts.com



I'm cold and hungry. I see humans sitting around a bonfire. Maybe I can ask for food. What could possibly go wrong?

## Thousands of years later...





Simon Clark @si... · 11h … In Bristol Harbour right now an aquatic species of lorry is trying to climb onto land for the first time Evolution is beautiful




# 1 kg of falling figs = 1 FigNewton







### Neuro-imaging of different earthers.

### FINALLY FINDING THE PERFECT BEDTIME STORY FOR YOUR CHILD

# <text>







Velociraptor are waiting for lunch when they notice a Triceratops eating a nice salad. "Why was he served before us?" asks the Velociraptor in irritation. "Why," says the T-Rex, "because he was herbivorous."







"Oh, God! It's that creepy Ted Sheldon and Louise Dickerson. ... They're skinkheads, you know."

Moore, 2008). In addition, the hypothalamus serves as a vital link between the brain and the endocrine system (a network of hormone-producing glands, discussed later in this chapter). The hypothalamus plays a major role in the regulation of basic biological drives related to survival, including the so-called "four Fs": fighting, fleeing, feeding, and mating. For example, when researchers



### WHEN YOU THINK ABOUT HOW HUGE THE EARTH IS, AND HOW THE EARTH IS JUST A TINY BALL ORBITING THE SUN, WHICH IN TURN IS A MINSCULE SPEC IN THE UNIVERSE

### IT'S PRETTY EASY TO RATIONALIZE EATING AN ENTIRE PIE.

### HOW to MAKE INFINITE ENERGY



Cat always lands on her feet.



Bread with butter always falls butter side down.



Fasten bread with butter to cat's back.





Attach cat-bread to generator.



### The Institute of Unfinished Research has concluded that 6 out of 10 people













# -ions

## are

# -sitive

# SWEAR JAR

### Telling people about science when I wasn't asked.











# Anything is possible IFF both parties don't know what they're talking about.



- M. E. Kabay

#### THE MOST DANGEROUS FOODS ACCORDING TO DIETARY EXPERTS



(c) Mikael Wulff & Anders Morgenthaler

truthfacts.com

### LAW OF BIOMECHANICS



The severity of an itch is inversely proportional to the ease of reaching it.

### THE LAW OF HOT COFFEE



As soon as you sit down to a nice cup of hot coffee, your boss will ask you to do something that will last until your coffee is cold.

### THE LAW OF LOCKER ROOMS



if there are only two people in a locker room, they will be using adjacent lockers.

#### **The Law of Technical Support**



When your computer does not work, call Tech Support so that you can look like an idiot when the system works perfectly as soon as you get the agent on the line.



Sixteenth-century

Spanish sailing

ships could go 300

Seagues before

resupplying.

That's 900 miles to

the galleon!

### A consequence of deforestation.







### Watermelon



Earthmelon







Airmelon



### THE ELEMELONS

# Oy.

The snow is melting faster because of daylight savings time. There is the same amount of sunlight, but the extra hour of afternoon sun is warmer than the hour of morning sun. Go back to standard time and the melting will slow down and less flooding. Problem solved. **Observer** in Hampton



# "Brother Mendel – we grow tired of peas!"







"No more bean dip for me, dear. I'm trying to reduce my carbon footprint."

### BACTERIA








1 million microphones = 1 phone 1 million phones = 1 megaphone



# 2x10<sup>3</sup> mockingbirds = 2 kilomockingbird



# 2 monograms = 1 diagram

#### CORRELATION



#### AIN'T NECESSARILY CAUSATION.



Adam Cerious @Browtweaten

## The opposite of formaldehyde is casualdejekyll

#### Ancient skull found on archaeological dig is proof of our alien origins.





# Pangea?

The theoretical physicists' attempt to design a car using quantum mechanics resulted in a lawsuit for violation of intellectual-property rights by the family of Maurits Escher.



- M. E. Kabay



I couldn't afford to pay for an Ancestry DNA kit, so I just announced that I had won the Lottery.

Soon I found out who all my relatives are....



YOU HEARD ME, PROFESSOR! GET IN THERE! 11 11. 11. 11 44 When 11 . 11. Aller .11 ille. 100 6-11 SCOPYRIGHT 2016 ple. DYBILLWhilehead 111 11.1 RICHITED DY BRS.COM Facebook.com/FreeRangeComic



#### Killer robots carrying explosives?

What could possibly go wrong??



# **VTREE**



# The Brontësaurus



MORE FACTS OF NATURE: As part of nature's way to help spread the species throughout its ecological niche, bison often utilize a behavior naturalists have described as "ballooning."

#### THE EVOLUTION OF DIGITAL MEDIA



(c) Mikael Wulff & Anders Morgenthaler

truthfacts.com









SCIENCE CAN SAVE LIFES

#### WHAT GREEK LETTERS MEAN IN EQUATIONS

- IT THIS MATH IS EITHER VERY SIMPLE OR IMPOSSIBLE.
- $\Delta$  something has changed.
- SOMETHING HAS CHANGED AND IT'S A
- MATHEMATICIAN'S FAULT.
- O CIRCLES!
- ¢ ORBS
- E NOT IMPORTANT, DON'T WORRY ABOUT IT.
- U, V IS THAT A VOR A U? OR ... OH NO, IT'S ONE OF THOSE.
  - M THIS MATH IS COOL BUT IT'S NOT ABOUT ANYTHING THAT YOU WILL EVER SEE OR TOUCH, SO WHATEVER.
  - ∑ THANK YOU FOR PURCHASING ADDITION PRO®!
  - TT ... AND THE MULTIPLICATION® EXPANSION PACK!
  - ζ THIS MATH WILL ONLY LEAD TO MORE MATH.
  - B THERE ARE JUST TOO MANY COEFFICIENTS.
  - OL OH BOY, NOW THIS IS MATH ABOUT SOMETHING
  - REAL. THIS IS MATH THAT COULD KILL SOMEONE.
  - OODH, SOME MATHEMATICIAN THINKS THEIR
  - Ω FUNCTION IS COOL AND IMPORTANT.
  - $\omega$  A LOT OF WORK WENT INTO THESE EQUATIONS and you are going to die here among them.
  - O SOME POOR SOUL IS TRYING TO APPLY THIS MATH TO REAL LIFE AND IT'S NOT WORKING.
  - EITHER THIS IS TERRIFYING MATHEMATICS OR
  - > THERE WAS A HAIR ON THE SCANNED PAGE.
  - Y ZOOM PEW PEW PEW [SPACE NOISES] ZOODOM!
  - P UNFORTUNATELY, THE TEST VEHICLE SUFFERED
  - AN UNEXPECTED WING SEPARATION EVENT.
  - GREETINGS! WE HOPE TO LEARN A GREAT
  - E DEAL BY EXCHANGING KNOWLEDGE WITH YOUR EARTH MATHEMATICIANS.
  - $\Psi$  YOU HAVE ENTERED THE DOMAIN OF KING TRITON, RULER OF THE WAVES.

So, what happens if we're not the first one to reach the egg?

We're tadpoles, Ted. Stop looking up stuff on the Internet.

# Just fell asleep at the beach and woke up with a hideous tan line



# WHY BIOLOGISTS USE SCIENTIFIC TAXONOMY INSTEAD OF COMMON NAMES



SEAHORSE





# 10<sup>12</sup> pins = 1 terrapin

- M. E. Kabay

# Do not use these images to teach your kids arithmetic.



The universal translator is broken.

.

# Qu'est-ce que tu dis?

135

# Beep Boop Beep?



# ...and that is how vegans are born





A botanist complained that the tomatoes, eggplants, green beans, mushrooms and zucchini should NOT be sold in the vegetables section of the store.

## FORMALDEHYDE

## CASUAL-DEHYDE



# Our research group has been studying the effects of alcohol on people's ability to walk. The results are staggering!

## We've had to adapt, Dorothy.

Nobody uses imperial weights these days.



#### **GRILLED STEAK**

#### **GRILLED CHICKEN**





#### (c) Mikael Wulff & Anders Morgenthaler

truthfacts.com





"Tm an optimist. I have every confidence that global warming will be nullified by nuclear winter."


"Is it close enough to spring for nice weather not to be existentially terrifying?"



WWW. PHDCOMICS. COM

## WHAT DO YOU CALL AN ACID WITH AN ATTITUDE?





Moments before he was ripped to shreds, Edgar vaguely recalled having seen that same obnoxious tie earlier in the day.



# MY ANATOMY EVAM:

# DENTIFY THIS NEBUE







I'm reading a fascinating book about antigravity and I just can't put it down!

- Prairie Home Companion



Naysayers, during 21st century pandemic

### NEW RULE FOR SPORTS-WRITING: THE PHRASE "PHYSICS DEFYING" MAY ONLY BE USED WHEN APPLICABLE.

AND, IN A PHYSICS-DEFYING MOVE, LEBRON JAMES' JUMPSHOT DETECTED A PHOTON'S MOMENTUM AND POSITION AT THE SAME TIME.







For a very brief period, medieval scientists were known to have dabbled in the merits of cardboard armor.









# This is what an Irish scientist said would happen to us if we don't stop the anthropogenic extinction event. Say it fast.







### WHAT HELICOPTERS DO IN MOVIES





(c) Mikael Wulff & Anders Morgenthaler

truthfacts.com

### THE BS ASYMMETRY PRINCIPLE

THE AMOUNT OF ENERGY NEEDED TO REFUTE BS IS AN ORDER OF MAGNITUDE BIGGER THAN TO PRODUCE IT

WA'IT! I BET THE MOON'S MADE OF CHEESE



WELL, SPECTROGRAPHIC ANALYSIS AND ORBIT CALCULATIONS SUGGEST NOT. PLUS, WE BUILT A ROCKET, TOOK PEOPLE THERE, AND THEY COULDN'T EAT IT. .... HM, YEAH ... I'M STILL THINKING CHEESE.



EFFORT

sketchplanations

AKA BRANDOLINIS LAW



Ernest -- a carbon dioxide dynamo









### **CAPTCHAs** for scientists



# It's shocking how well science-ing and metal working mix!

# My latest DIY Project: A car battery carrier/handle



# Cation cat.i.on

Pronunciation: [kat-ahy-uhn,-on] -Noun Chemistry.

an ion with a paws-itive charge.
the cutest ion ever.

# Cation

Pronunciation: [kat-ahy-uh n, -on] -noun, Chemistry

An ion with a paws-itive charge.
The cutest ion ever.

## SOME DAY WHEN SCIENTISTS DISCOVER THE CENTER OF THE UNIVERSE,

## A LOT OF PEOPLE ARE GOING TO BE DISAPPOINTED TO FIND OUT IT ISN'T THEM.





"High sodium, high cholesterol, lots of toxins - your blood test is remarkably similar to a potato chip."





SUMP, COM/ DIST. EY CREATORS






"I don't understand cloning."

"Yeah, that makes two of us."

#### ARE MEN HELPFUL TO YOU?



(c) Mikael Wulff & Anders Morgenthaler

truthfacts.com





Entomology display of coleoptera (beetles) at Cleveland Museum of Natural History.



12/27/90



#### At Random Comics by Ryan Mason







THERE'S NO SCIENTIFIC CONSENSUS THAT WE'RE CAUSING GLOBAL WARMING.

BUT 97% OF CLIMATE SCIENTISTS AGREE ON HUMAN CAUSED GLOBAL WARMING.

WHY BRING **UP CONSENSUS?** SCIENCE ISN'T DECIDED BY **CONSENSUS!** 

### \*somewhere in ancient Greece







Thats a horse

Yes, its surely a horse

# Simplified constellation names



MCWIT LABS CONTROL GROUP 4 0 J. In marks







#### TOM GAULD





THE CHRISTIAN SCIENCE MONITOR BENNEH

# $\begin{array}{l} \textbf{COWCULUS} \\ \textbf{Y} = \textbf{a} \qquad \textbf{Y} = \textbf{X}^2 \end{array}$



 $Y = X^3$ Y = cos(X)



# CREATIONISM Because it's easier to read one book than a bunch of hard ones



After flicking on the light, Professor Zurkowitz is caught off guard by the overnight success of his efforts to crossbreed flying fish and piranhas. "And then I won the gold medal of the Society of Advanced Carpentry & Artificial Intelligence..."



#### Do not exaggerate your CV.











DIST. BY ANDREWS MAMEEL SYNDICATION - @2021 R. BOLLING -1554- TO JOIN THE INNER HIVE. GO TO tomthedancingbug.com



"That thing's always been there."

# WHEN BUILDING A SPACESHIP, THE TINIEST DETAILS ARE GRUGIAL

## FOR EXAMPLE, THIS SPACESHIP MAY BE FLAWED BECAUSE IT HAS A GIANT HOLE IN THE SIDE



#### **Multiple Choice Question**

- Multiple Choice: Which of the following is the most different from the others?
- □ (A) A Ph.D. in Mathematical Biology
  - (B) A Ph.D. in Theoretical Mathematics
  - (C) A Ph.D. in Statistics
  - (D) A large pepperoni pizza
- Answer: (B) the other three can all feed a family of four.









"Along with 'Antimatter,' and 'Dark Matter,' we've recently discovered the existence of 'Doesn't Matter,' which appears to have no effect on the universe whatsoever."

#### THE BIGGEST LIES ON THE INTERNET



(c) Mikael Wulff & Anders Morgenthaler

truthfacts.com





Disaster befalls Professor Schnabel's cleaning lady when she mistakes his time machine for a new dryer.

# What does a subatomic duck say?

# QUARK!

- M. E. Kabay
#### AN EARLY BIRD CATCHING THE WORM





 $E = mc^{3} E = mc^{4}$   $E = mc^{7} E = mc^{5}$  He oduHe oduE=mc3 Gouman -67n---E=mc ET)



"Now that desk looks better. Everything's squared away, yessir, squaaaaaared away."



## Ferrari

# Agrrari

## Aurrari







### Samuel-L-Jackson

### Samuel-R-Jackson



"Amazing! The mummified remains of a prehistoric cave-painter, still clutching his brush! ... Seems he made an enemy, though."







# Entomologists see two species in the same genus



The Ultimate Thermodynamics Game

## You can't win. You can't break even. You can't even quit the game.

HGLISH HERITAG ERWIN SCHRÖDINGER Creator of Wave Mechanics lived and didn't live here 1940 - 1956

#### ADIPOCYTE



Brain cells, hair cells, skin cells: they all die constantly, but fat cells seem to have eternal life.

- M. E. Kabay



#### thelogicofscience.com



#### THE EVOLUTION OF INTELLECTUAL FREEDOM







"You're telling us that Once Upon A Time fish just walked onto the land? Next I suppose you are going to tell us that there are fish that fly...! Oh, man, I don't know what kind of catnip you're on, but I want some!"

### THE EVOLUTION OF INTELLECTUAL FREEDOM



	<i>S</i>	
SP	6	
	~ <b>_</b>	

Men's sandals

\_\_\_\_\_

Sandals that look good on men

(c) Mikael Wulff & Anders Morgenthaler

truthfacts.com

# Prokaryotes

# Eukaryotes



### Speed Bump by Dave Coverly









## When flat earthers realise they've been breathing from atmosphere and not atmoflat



## The Flat Earth Society has members all around the globe.

Share

007 4.9K

32 Comments 306 firms

Like Comment

Write a comment

Physics-Astronomy.com Say that again, but slowly Like Reply 0 1,986 20 hrs



#### **\*\*** Smithsonian

PALEOANTHROPOLOGY DIVISION SMITHSONIAN INSTITUTION 207 PENNSYLVANIA AVENUE WASHINGTON, DC 20078

March 14, 2008

Robert C. Cullthorpe 321 Millhave Road Mattaponi, VA 23110

Dear Sir:

Thank you for your latest submission to the Institution, labeled "211-D, layer seven, next to the clothesline post. Hominid skull." We have given this specimen a careful and detailed examination, and regret to inform you that we disagree with your theory that it represents "conclusive proof of the presence of Early Man in Charleston County two million years ago." Rather, it appears that what you have found is the head of a Barbie doll, of the variety one of our staff, who has small children, believes to be the "Malibu Barbie." It is evident that you have given a great deal of thought to the analysis of this specimen, and you may be quite certain that those of us who are familiar with your prior work in the field were loathe to come to contradiction with your findings.

However, we do feel that there are a number of physical attributes of the specimen which might have tipped you off to its modern origin:

- 1. The material is molded plastic. Ancient hominid remains are typically fossilized bone.
- 2. The cranial capacity of the specimen is approximately 9 cubic centimeters, well below the threshold of even the earliest identified proto-hominids.
- 3. The dentition pattern evident on the "skull" is more consistent with the common domesticated canine (dog) than it is with the "ravenous man-eating Pliocene clams" you speculate roamed the wetlands during that time. This latter finding is certainly one of the most intriguing hypotheses you have submitted in your history with this institution, but the evidence seems to weigh rather heavily against it.

Without going into too much detail, let us say that:

- A. The specimen looks like the head of a Barbie doll that a dog has chewed on.
- B. Clams don't have teeth.

#### 🗱 Smithsonian

It is with feelings tinged with melancholy that we must deny your request to have the specimen carbon dated. This is partially due to the heavy load our lab must bear in its normal operation, and partly due to carbon dating's notorious inaccuracy in fossils of recent geologic record. To the best of our knowledge, no Barbie dolls were produced prior to 1956 AD, and carbon dating is likely to produce wildly inaccurate results.

Sadly, we must also deny your request that we approach the National Science Foundation's Phylogeny Department with the concept of assigning your specimen the scientific name *"Australopithecus spiff-arino."* 

Speaking personally, I, for one, fought tenaciously for the acceptance of your proposed taxonomy, but was ultimately voted down because the species name you selected was hyphenated, and didn't really sound like it might be Latin.

However, we gladly accept your generous donation of this fascinating specimen to the museum. While it is undoubtedly not a hominid fossil, it is, nonetheless, yet another riveting example of the great body of work you seem to accumulate here so effortlessly. You should know that our Director has reserved a special shelf in his own office for the display of the specimens you have previously submitted to the Institution, and the entire staff speculates daily on what you will happen upon next in your digs at the site you have discovered in your back yard.

We eagerly anticipate your trip to our nation's capital that you proposed in your last letter, and several of us are pressing the Director to pay for it. We are particularly interested in hearing you expand on your theories surrounding the "trans-positating fillifitation of ferrous ions in a structural matrix" that makes the excellent juvenile Tyrannosaurus rex femur you recently discovered take on the deceptive appearance of a rusty 9-mm Sears Craftsman automotive crescent wrench.

Yours in Science,

(noso U

Joaso Olbini, Curator, Antiquities



## **Unexpected Fractal Result**



## In Schrodinger's Experiment

#### Just once.

## How often do planes crash?








Geology tip: There are so many microplates and ages that no one remembers them all, so in a pinch you can bluff using dog breeds.



1. Classic







# One of the interpretations of Gödel's Incompleteness Theorems is that "all self-referential systems are inherently chaotic."

Here is an example of that principle.





### I Tell Bad Jokes Because All The Good Ones





"They're harmless when they're alone, but get a bunch of them together with a research grant and watch out."

The school nutritionist has been telling everyone about the value of eating dried grapes at least once a day. They are packed with energy and rich in fiber, minerals and vitamins. They can boost iron levels, increase bone strength and help the digestive system.



It's all about raisin awareness!

#### WHEN DO YOU DISCOVER SPELLING ERRORS/TYPOS IN AN EMAIL



(c) Mikael Wulff & Anders Morgenthaler

Before you send it When you've just sent it

truthfacts.com

HEAVIEST OBJECTS IN THE UNIVERSE

Neutron star

Sun

My eyelids while

reading the methods

section of a paper

**Black hole** 





"Of course, the real charm of the place is that hole in the space-time continuum."



"I'm honored to share my research at our virtual academic conference."



"You youngsters call this an iceberg?? When I was a kid, we would never have called this an iceberg!"



## This Statue at Cairo Airport looks like it Defies the Law of Physics



"I see journal articles, patents, legal fees and then... nothing."



### Think you're bored?

Sir Isaac Newton invented calculus during the plague.

Do you have any idea of how bored you must be to invent calculus?









Matthew Yglesias 🔕 @mattyglesias

What was the precipitating event that led to the hydroxychloroquine/ ivermectin switch?

5:28 PM · 8/27/21 from Washington, DC · Twitter for iPhone

145 Retweets 71 Quote Tweets 2,235 Likes

,1,



#### Bobby T. @bobby\_strings · 17h Replying to @mattyglesias

I think the mane reason was not being saddled with needing a prescription and easily trotting over to tractor supply and pony up a few bits for some ivermectin. Neighsayers will cry foal and accuse me of gaitkeeping but this unbridled situation is becoming a night mare.

The fact that jellyfish have survived for 650 million years without having any brains gives hope to many people. A handy guide for any of you that are new to Birding...





"You grew up in a lab, too, Sylvia?"









### Chemists' laughter.



Unfortunately, Morris is an accountant at the Botany Institute; not a biologist.





Max Planck -- brilliant physicist, lousy pick up artist.

#### HOW LONG A HUMAN CAN LIVE WITHOUT...



(c) Mikael Wulff & Anders Morgenthaler

#### truthfacts.com



"What the? ... This is lemonade! Where's my culture of amoebic dysentery?"



Dr Frankenstein was disappointed with the letter from the Ethics Committee.



I asked the librarians at the University Library if the collection included a book about Pavlov's dogs and Schrödinger's cat.

# They said it rang a bell, but they weren't sure if it was there or not.


A photon is going through airport security. The TSA agent asks if he has any luggage.

### The photon says, "No, I'm traveling light."

c Stitch



## = A LOOK AT LOGICAL FALLACIES =



#### Premise accepted. Please state your arguments.







Rocking the anthropological world, a second "Lucy" is discovered in southern Uganda.

LOOSE PARIS







## CONDUCTOR









A diabolical new testing technique math essay questions



## Face palm...this person will vote...

Political agnostic The snow is melting faster because of daylight savings time. There is the same amount of sunlight, but the extra hour of afternoon sun is warmer than the hour of morning sun. Go back to standard time and the melting will slow down and less flooding. Problem solved. — Observer in Hampton

socialism to right this wrong!

doctor to do it if th more generic than Anyone else see a with this? — Metro ar

Does anyone really about so-called sta breakdown? Let th life like us.

- Don't w



# METEOR SHOWER: EXPECTATION

# METEOR SHOWER: REALITY

©Science Humor Facebook



Entire rest of the world:

Adult deer weigh roughly 68 to 136 kg and are about .5 to 2 m high.

#### Americans:

#### Adult deer weigh as much as 800 hamburgers and are about as tall as a bicycle.

#### MEWTOSIS





Roger crams for his microbiology midterm.







## iPhone went through mitosis 😂



Since peanuts are shaped like chromosomes, here is a mitotic peanut cake. If we wait long enough there will be two cakes :)





GREAT MOMENTS IN SCIENCE

SCHRÖDINGER CURIE PASTEUR NEWTON

www.piecomic.com



"Bring me a stem cell."





#### **ALL YOU NEED IS**

#### $x^2 + y^2 = 9$

#### y = |-2x|

#### $x = -3|\sin y|$



#### **CONTENT OF WOMEN'S MAGAZINES**



Accept yourself – you're beautiful just the way you are

How to lose 20 lbs in four weeks

(c) Mikael Wulff & Anders Morgenthaler

truthfacts.com



 About your cat, Mr. Schrödinger -I have good news and bad news.



Isaac Newton struggles to write the economic impact section of his 'gravity' proposal.



When Queen Elizabeth II of England farts during a formal dinner, the other guests must pretend nothing happened.

You see, noble gases have no reactions.

#### off the mark.com

#### by Mark Parisi





A sinkhole roughly the size of six to seven washing machines has closed the northbound lanes of State Line Road near 100th Street in Kansas City, Missouri.





@Ralphium

Americans will measure with anything but the metric system

### THE FAR SIDE®

#### by GARY LARSON



"It's time we face reality, my friends... We're not exactly rocket scientists."

#### What kind of dinosaur writes romance novels?

#### A Brontësaurus

WHERE ATL NTA GETS ENGAGED

D.

GELLER

#### SEPT 20 - 22

010055

#### BUY HER A DIAMOND GET A FREE HUNTING RIFLE

CICLEME CHANNEL



Although of considerable debate among paleoanthropologists, Australopithecene mobsters are thought to have been responsible for some of the fossilized treasures of the Olduvai Gorge.

## Things I learned in Organic Chemistry





Deadly compounds

Nomenclature

How to draw hexagons






"You grew up in a lab, too, Sylvia?"

## The Skull

## Artist's depiction of the animal in a paleontology book

## The Animal





"Hey! I'm trying to pass the potatoes! ... Remember, my forearms are just as useless as yours!"

## IF YOU'RE PAYING \$3.00 FOR A BOTTLE OF SMART WATER,

## IT ISN'T WORKING.



## Yo Frank, you trying to evolve today?



## God's Perfect Creation The Horseshoe crab

445 million years of non-evolution



## Philosophy for chemists:



3.141592653589793238462643383279502884197169399375105820974944592307816406286208998628034825342117067982148 5°112129017931051185480744623799627495673518857527248912279381830119491298336733624406566430860213949463°5 73637178721468440901224953430146549585371050792279689258923542019956112129019608640344181598136297747713u9 **336244**0656643086021**394946**39522473719070217986094370277053921717629 

#### Why does pi always refuse anaesthesia in the dentist's chair and just meditate?

Because it transcends dental medication.

HI DARLING.

USE MY ATM CARD, TAKE ANY AMOUNT DUT, GO SHOPPING AND TAKE YOUR FRIENDS FOR LUNCH

 $P_{iN} CODE: \int_{0}^{2} \frac{(3x^{3} - x^{2} + 2x - 4)dx}{\sqrt{\chi^{2} - 3x + 2}}$ 

I LOVE YOU HONEY VISA



### Why science teachers should not be given playground duty.

www.Facebook.com/GeezerPlanet

# Due to reduced air pollution we can finally see Pluto





WWW. PHDCOMICS. COM





WE'RE SUPPOSED TO RESEARCH OUR SUBJECT, WRITE IT UP, AND PRESENT IT TO THE CLASS WITH A VISUAL AID.





## PROOF OF GLOBAL WARMING

1720 1900 1950 1970 1980 1990 2010









## Going Bananas







When you buy it

When you put it on your bag

When you want to eat it

(c) Mikael Wulff & Anders Morgenthaler

truthfacts.com





"Well, your quantum computer is broken in every way possible simultaneously."



THE PROJECT EXISTS IN A SIMULTANEOUS STATE OF BEING BOTH TOTALLY SUCCESSFUL AND NOT EVEN STARTED.

2012





"I think we'd better keep this quiet."



#### **PREDICTING RACE-HORSE SUCCESS**

A geneticist, a physiologist and a physicist were summoned to meet a wealthy racehorse magnate.

He told them he would give a million pounds to the one who could accurately identify racewinning horses.

After six months of hard work, they returned to present their results to the expectant millionaire.

The geneticist said, "I've looked into all the current genetic research, checked blood-lines going back decades, but there are just too many behavioral and environmental factors. I can't help." The physiologist said, "I've looked at muscle mass, bone volume and density, and all the other factors I can think of, but the problem's too complex. There's just no guarantee of predicting a winner."

Finally, the physicist calmly walks up to the millionaire and gives him an index card. "Here you go," he says "I've found an equation that solves the problem for you."

"Wow," said the millionaire, "That's impressive...I'll get my cheque book."

"Great. But there's one thing you should know," said the physicist. "It only works for a spherically symmetric horse travelling in a vacuum."

#### (38)

## You thought smoking at the pump was risky 😂 😂 😂



Research grant rejection **5** Stages of Grief

1. Denial

"Dear Program Manager, there seems to have been an error..."



"If you just let me respond to the reviewers... I can fix this..."

4. Depression



"I'm never going to get tenure ... "



"I will never apply to your lousy, corrupt funding agency again."

5. Acceptance



Resubmit same proposal with different title, smaller budget...





"Okay, Zorky, this one is all yours. ... Take a deep breath, relax, and give him one, short blast remember, this is probe and release."



Allen, can you get the door this time? Last time they wanted a bucket of Erbium 68, and if we don't have that, Ytterbium 70 will do..

## Research in academia





## Actual goal after funded



Understood by RA



Observed in first experiment

Observed in repeat experiment



#### Presented



#### Submitted





## TOM GAULD

UEOR-1	UNEXPEC	TED EXP	ERIMEN	IT OUT
TICK ALL B	OXES THAT	APPLY AN	D SUBM	IT TO L
1. CREAT MES BAD VOL TIM	TED: SS SMELL CANO E TUNNEL		4.	SUMMO HEAL DEMO ZOMO TERN
2. EXPLO SMA MET LAR APC	OSION: ALL DIUM GE DCALYPTIC		5.	STAFF: SHAK INJU ENCH IN AN
3. DAMA EQU BUI CON SPAC	AGED: IPMENT LDING ITINENT CE-TIME CON		6.	SUPERF FLIGH STREE X-RA

NewScientist

H

## TCOME REPORT FORM

ABORATORY MANAGER

ONED: TH AND SAFETY OFFICER ON BIES MINATOR

KEN JRED JANTED NOTHER DIMENSION POWERS CONFERRED: HT NGTH NGTH SIBILITY

#### 10 tips for responding to reviewers' comments



- 1. Stay calm
- 2. Stay calm ....
- Don't just repeat positive reviewer comments back
- Refute errors with evidence and misunderstandings with clarification
- 5. Re-read response
- 6. Take out the passive aggressive phrases
- 7. Sleep on it
- 8. Take out the sarcasm
- 9. Take out \*ALL\* the sarcasm
- 10. Submit response to reviewers


"Is it just me or are these review panels getting a lot tougher?"

#### On the rheology of cats

M.A. Fardin<sup>1,2,3,\*</sup>

<sup>1</sup>Université de Lyon, Laboratoire de Physique, École Normale Supérieure de Lyon, CNRS UMR 5672, 46 Allée d'Italie, 69364 Lyon cedex 07, France. <sup>2</sup>The Academy of Bradylogists. <sup>3</sup>Member of the Extended McKinley Family (EMF). (Dated: July 9, 2014)

In this letter I highlight some of the recent developments around the rheology of *Felis catus*, with potential applications for other species of the felidae family. In the linear rheology regime many factors can enter the determination of the characteristic time of cats: from surface effects to yield stress. In the nonlinear rheology regime flow instabilities can emerge. Nonetheless, the flow rate, which is the usual dimensional control parameter, can be hard to compute because cats are active rheological materials.

 $\pi\alpha\nu\tau\alpha \ \rho\epsilon\iota$ ! Everything flows! This famous aphorism used to characterize Heraclitus' thought is also the motto of *rheology*. "Everything flows and nothing abides; everything gives way and nothing stays fixed." a recipe for insubordination actually from Simplicius and Plato. Everything flows? Well, it depends on the definition of a *flow*; if sufficiently general, there is no doubt that there are no exceptions to the rule! What is a flow? What is a fluid? As pointed out from the start by Reiner, the essential value of rheology is to recognize that states of matter are a matter of time(s). The first time, is a *time* of observation T. What is true today may not be true tomorrow. Time over time, one day 49, the next 50.

Historically, the popular distinction between states of matter has been made based on qualitative differences in bulk properties. Solid is the state in which matter maintains a fixed volume and shape; liquid is the state in which matter maintains a fixed volume but adapts to the shape of its container; and gas is the state in which matter expands to occupy whatever volume is available. Following these common sense definitions, a meta-study untitled "Cats are liquids" was recently published on boredpanda.com. I propose here to check if the panda's claim that the cats are liquid is solid, by using the tools of modern rheology.

First of all, 'maintains', 'adapts' or 'expands' are verbs. They describe actions unfolding with a characteristic time scale  $\tau$ , which we will call *relaxation time*. From T and  $\tau$  we can define the *Deborah number* as:

$$De \equiv \frac{\tau}{T} \tag{1}$$

Usually T is just the duration of the experiment, but for oscillatory flows it is the inverse of the frequency (and thus De is analogous to a Strouhal number). The relaxation time  $\tau$  can have a variety of origins. When one seeks the difference between gas and liquid, 'relaxing' will mean 'expanding' and so  $\tau$  will be linked to the characteristic rate of expansion of the material. The expansion



FIG. 1: (a) A cat appears as a solid material with a consistent shape rotating and bouncing, like Silly Putty on short time scales. We have  $De \gg 1$  because the time of observation is under a second. (b) At longer time scales, a cat flows and fills an empty wine glass. In this case we have  $De \ll 1$ . In both cases, even if the samples are different, we can estimate the relaxation time to be in the range  $\tau = 1$  s to 1 min. (c-d) For older cats, we can also introduce a characteristic time of expansion and distinguish between liquid (c) and gaseous (d) feline states. [(a) Courtesy of http://catbounce.com, (b) http://www.dweebist.com/2009/07/kitten-in-wine-glass/, (c) http://imgur.com/gallery/UuNSR, (d) http://imgur.com/s7JtV]

is a type of flow. In this case, we will say that we have a gas if  $De \ll 1$ . When one seeks the difference between liquid and solid, 'relaxing' will mean 'adapting' and so  $\tau$ will be linked to the characteristic rate of adaptation of the shape of the material to its container. The adaptation of the shape of the material is a type of flow. In this case, we will say that we have a liquid if  $De \ll 1$ . Solids 'maintain' their shape and volume, *i.e.* they do not flow. But solids can be deformed under stress. Note finally that any flow is intrinsically made of deformations.

As illustrated in Fig. 1a, for  $De \gg 1$  a cat appears

<sup>\*</sup>Corresponding author; Electronic address: marcantoine.fardin@ ens-lyon.fr



FIG. 2: (a) Extensional rheology of a cat before capillary break-up. (b) Cat on a superfelidaphobic substrate showing a high contact angle. (c) Tilted jar experiment showing the yield stress of a kitten. (d) Spreading of a cat on a very rough substrate. (e) Low affinity between cats and water surfaces. (f) Sliding cat on smooth floor. (g) Adhesion of a cat on a vertical wall. [Courtesy of (a) facebook.com, (c) http://metro.co.uk/2011/02/18/ksyusha-the-kitten-is-cat-in-a-jar-639735/, (d) http://www.theyfailed.com/cats-sleep-anywhere/, (f) http://www.mirror.co.uk/news/world-news/youtube-watch-hilarious-viral-of-two-882779, (g) http://amazinghandpaintedmurals.com/picture\_gallery\_-page\_3]

solid, whereas for  $De \ll 1$  it seems liquid. From these preliminary experiments, knowing T we can estimate the relaxation time to be in the range  $\tau = 1$  s to 1 min, for normal cases of *Felis catus*. Note that the samples used in Fig. 1a-b are relatively young. Older cats may have a shorter relaxation time, and thus become liquid more easily than agitated kittens, for which  $\tau$  can reach values as high as a few hours. The assumption of incompressibility may also fail for older cats, which can acquire gaseous properties like in Fig. 1c-d. In this letter, we will tend to ignore this thixotropic behavior. There's an old saying in investing: even a dead cat will bounce if it is dropped from high enough. Where, of course, the dead cat bounce refers to a short-term recovery in a declining trend.

Overall, the Deborah number is the dimensionless expression of the concept of linear viscoelasticity. The greater the Deborah number, the more elastic/solid the material; the smaller the Deborah number, the more viscous/fluid it is. Thus, rheology suggests only two states of matter: solids that deform; and fluids that flow. Both gases and liquids flow, they are fluids, the first compressible, the other incompressible. In general, both the fluidlike and the solid-like properties of a material can be complex, in the sense that the solid part may not be purely elastic, and the fluid part may not be purely viscous. For simple incompressible and athermal molecular fluids, the relaxation time will simply be the viscous dissipation time  $\tau = \delta^2 / \nu$ , where  $\delta$  is the thickness of the momentum boundary layer and  $\nu$  is the kinematic viscosity. For more complex fluids,  $\tau$  can have a large range of origins, which often require chemistry and/or biology to be well understood.

In the first part of this letter I wish to highlight the potential factors that have to be taken into account in computing the value of  $\tau$  for cats. Fig. 2a shows the capillary bridge formed during extensional rheometry of *Felis catus*. First, in the introduction, we assumed  $\tau$  to be a scalar, but it can have a higher dimensionality. Usually the time scale is considered as a contribution to viscosity, which in the most general case is a tensor of rank 2. For simple incompressible fluids symmetry considerations reduce this tensor to a scalar. The extensional viscosity is simply 3 times the shear viscosity.

fluids, the extensional viscosity can be orders of magnitude different, usually larger than the shear viscosity for polymeric materials. For cats, the determination of the Trouton ratio is complicated but the situation seems opposite. In the absence of reliable extensional rheology data, we can only point to the fact that when cats are deformed along their principal axis, they tend to relax more easily, suggesting that the extensional time is smaller than the shear time. Transient strain-hardening can nonetheless occur. Second, because, flows of cats are usually free surface flows, the surface tension between the cat and its surrounding medium can be important and even dominant in the rheology, especially in CATBER (Capillary thinning and breakup extensional rheometer) experiments. The catpillary number becomes important  $\tau = f(Ca)$ , with  $Ca \equiv \eta U/\gamma_{LV}$ , where  $\eta$  is the shear viscosity, U is a characteristic flow velocity and  $\gamma_{LV}$  is the surface tension (not to be confused with the deformation). Let us recall that even water droplets bouncing on hydrophobic substrates can behave elastically, with a response time  $\tau = \sqrt{\rho R_0^3/\gamma}$ , where  $\rho$  is the density and  $R_0$  the size of the drops. When the fluid is complex, the situation can be even more entangled.

The wetting and general tribology of cats has not progressed enough to give a definitive answer to the capillary dependence of the feline relaxation time. Fig. 2b gives an example of a lotus effect of *Felis catus*, suggesting that the substrate is superfelidaphobic. This behavior is usually distinguished from the yield stress that cats can also display, as shown in Fig. 2c, where the kitten cannot flow because it is below its yield stress, like ketchup in its bottle. It is still unclear what physical and chemical properties generate superfelidaphobicity, but a Cassie-Baxter-like model seems plausible. Here, the roughness of the cat's fur would be as determinant as the roughness of the substrate, but probably with somewhat opposite effects. Indeed, cats are often found to spread on rough substrates as seen in Fig. 2d, but they have low affinity for substrates that smooth their fur, like water in Fig. 2e. Significant wall slip and shear localization can also be involved in some experiments, like shown in Fig. 2f, where there is a very significant relative velocity between the substrate and the cat. Counter-intuitively, gravity seems (continues page 30)



FIG. 3: (a) A cat spontaneously rotates in a cylindrical jar. (b) Normal forces and Weissenberg effect in a young sample of *Felis catus*. [Courtesy of (a) http://guremike.jp/, (b) http://buzzlamp.com/10-weird-places-cats-get-stuck-in/]

to enhance adhesiveness, as shown in Fig. 2g.

In the last part of this letter, I wish to discuss the possibility of flow instabilities in *Felis catus*. Linear viscoelasticity conceptualizes the fact that if its Deborah number is small a material is flowing. The physics of flow instabilities warns us that, as the characteristic rate of deformation  $\dot{\gamma}$  increases, non trivial secondary flows emerge and eventually become chaotic. Here, the important dimensionless number will be the Reynolds-Weissenberg number (a sort of Péclet number):

$$Rw \equiv \tau \dot{\gamma} \tag{2}$$

The limit  $Rw \ll 1$  defines the laminar base flow. Nontrivial secondary flows will usually appear around  $Rw \sim$ 1. Finally, the flow will be turbulent if  $Rw \gg 1$ . For simple fluids, the relaxation time is the viscous dissipation time, the driving force of instability is inertia and the dimensionless number is just the usual Reynolds number Rw = Re. For more complex fluids in creeping flow (Re = 0) recent progress on instabilities in viscoelastic polymers and micelles solutions suggests that the relevant dimensionless number is the Weissenberg number alone, *i.e.* Rw = Wi if Re = 0. In this case elastic turbulence can be achieved without inertia. We speak of viscoelastic flow instabilities.

When taken in its philosophical form, "panta rhei" is the theory of motion: the belief that everything is dynamic and that the state of rest is illusory. But for centuries, this ontology was superseded by Aristotle's viewpoint. He posited that in the absence of an external motive power all objects would come to rest and that moving objects only continue to move so long as there is a power inducing them to do so. Modern physics started when Galileo and his followers put an end to Aristotle's dogma by showing that, unless acted upon by a net unbalanced force, an object will maintain a constant velocity. This was key to the realization that motion is relative and preceded by the more fundamental concept of frame of reference, e.g. the train moves with respect to the frame of the platform, but the platform moves with respect to the frame of the train. Note that even if rheologists have taken Heraclitus' doctrine as their motto, they depart from his thoughts by a paradoxical but useful conception

of motion or flow, alternatively faithful to Aristotle or Galileo.

Simple fluids like water are "passive", they continue to move or deform so long as there is a power inducing them to do so. In this case, the typical flow rate  $\dot{\gamma}$  is simply imposed by the operator and Rw is a natural control parameter. For cats, assuming we have a well-defined relaxation time  $\tau$ , computing Rw is still challenging because defining  $\dot{\gamma}$  can be difficult since cats are "active" materials. They have their own motive power. Like other biologically active materials (acto-myosin gels, bacterial swimmers, epithelium, packs, flocks, schools, *etc.*), they can exhibit spontaneous rotation as shown in Fig. 3a.

Despite these difficulties, the question remains: are cats prone to flow instabilities when Rw increases? In a cylindrical flow geometry, instabilities in the purely inertial case (i.e. Rw = Re) and in the purely elastic case (i.e. Rw = Wi) lead to vortex flows. In the inertial case, the centrifugal force drives this instability and is also responsible for the deformation of the top free surface, which climbs up the outer walls of the cylinder. In the purely elastic case, the mechanism is opposite: centripetal normal forces ("hoop stresses") drive the instability and are also responsible for the Weissenberg effect, where the fluid climbs at the center of the free surface. In general, both inertial and elastic effects can occur. In flows of Felis catus, significant normal forces can occur and they seem to be able to drive a Weissenberg-type effect, as shown in Fig. 3b.

In conclusion, much more work remains ahead, but cats are proving to be a rich model system for rheological research, both in the linear and nonlinear regimes. Standing questions include the potential implications of the rheology of cats on their righting reflex, and whether the nonlinear self-sustaining mechanism for turbulence in pipe is applicable to streaks of tigers. Very recent experiments from Japan also suggest that we should not see cats as isolated fluid systems, but as able to transfer and absorb stresses from their environment. Indeed, in Japan, they have cat cafes, where stressed out customers can pet kitties and purr their worries away.

#### Acknowledgments

No animals were (h)armed in the making of this study. I thank L. and J.F. Berret for providing a reliable technique to load *Felis catus* in different geometries: 1. Bring an empty box; 2. Wait. Illustrations of the protocol can be found on the web (weknowmemes.com/2012/11/how-to-catch-a-cat/, or youtube.com/watch?v=pX4yK4yG3pE). This paper was written in honor of Gareth's 50th birthday and his Bingham award. Many members of the EMF helped motivating this study, all good things in it can be found in Gareth's 200+ publications, and all mistakes are mine. Help and encouragements from A. Jaishankar, S. Manneville, V. Sharma and N. Taberlet were particularly valuable.

ME .. ME ... ME ... ME ... ME ... ME ... ME NARCISSUS TAKES -2 COPYRIGHT 2017 DY Bill Whilehead Facebook.com/FreeRangeComic CREATORS.CO REDO

## MONEY MAKES THE WORLD GO ROUNDP

### FALSE. CONSERVATION OF ANGULAR MOMENTUM CAUSES THE EARTH TO ROTATES

uickmeme.com

# LAB RULES



Rule #1: Never lick the spoon.



Rule #2: Hot glass looks just like cold glass.



Rule #3: If you don't know what you're doing, at least do it neatly.



Rule #4: Hiccups and pipettes don't mix.



Rule#5: Assume all unmarked beakers contain a highly toxic, fast acting poison.



Rule #6: You can't detect an odorless gas by smell.



Rule #7: If you don't know what a button does, do not push it.

## Some people don't understand how huge the sun actually is, so I added a banana for scale

I'm scared to death about the denial of science. Science is real. Science is the most real thing in our world, other than nature. I'm hoping we'll all get back to a place where we can really

# understand that science is tested knowledge.

## Harrison Ford







### Have you noticed that all the radio telescopes in the search for intelligent life are pointed away from Earth?

# A FREUDIAN SLIP IS WHERE YOU SAY ONE THING

## **BUT MEAN YOUR MOTHER**



Early adversaries in the great evolutionary debate



Animals and their mating songs



#### NATURAL SELECTION

Organic Compounds Hydrocarbons Biomolecules



## Primordial



## With Amino Acids

Chiff Pollard



Tip 8 - References: always go back to the original source!



Space X

## **Space Y**

### "See? I told you it wasn't a new planet!"





Late at night, and without permission, Reuben would often enter the nursery and conduct experiments in static electricity.







## FORMALDEHYDE

## CASUAL-DEHYDE



Scientists discover a new superbug.

Your cat trying to work out how to be both outside the door and inside at the same time using quantum superpositioning

 $\frac{3\left((2ny)^{3}\cdot(3ab+3x^{3})\right)}{z^{2}a^{2}b} = \frac{5r^{2}+3y^{2}-a^{2}-b^{2}}{z^{2}a^{2}b}$  $\frac{x^{*}-y^{*}}{\sqrt{2}} = \int \sqrt{\frac{(x^{*}-y^{*})(3z+2)}{\sqrt{2}}}$  $\int \frac{a' \cdot \frac{1}{2}b'}{b'} = \frac{(a' \cdot b^2 + y' \cdot y')(x')}{\sqrt{3x - 2y' - y'}}$ 



"Spare a dollar for some lab consumables, buddy?"

#### 40 People Missing After First Flat Earth Surfing Championship



Address of Address of Colors



@ John Atkinson, Wrong Hands . wronghands 1. com

So, what happens if we're not the first one to reach the egg?

We're tadpoles, Ted. Stop looking up stuff on the Internet.



"Apparently he learned his technique from supervising grad students."



"Zorak, you idiot! You've mixed incompatible species in the earth terrarium!"





"I still say it's only a theory."




Einstein discovers that time is actually money.

#### HOW PROFESSORS SPEND THEIR TIME







## When did they start telling the truths?









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#### joyoftech.com



# Velociraptor = Distanceraptor Timeraptor



"None of this research would have been possible without all the bitter professional vendettas that kept me going . . ."



### THE FACE YOU MAKE WHEN REALIZING

## COVID-19 DIES AT 80 DEGREES AND GLOBAL WARMING CAN SAVE US



"They're harmless when they're alone, but get a bunch of them together with a research grant and watch out."

# LOOSE PARTS









#### All my core beliefs contradict the scientific consensus on practically every topic.



#### How can all those scientists be so wrong??

# sin ( zania ) <sub>=</sub>



WWW.ANDERTOONS.COM



"I'm not saying that scientifically it's not an achievement. But why?!"



C MARK ANDERSON, WWW.ANDERTOONS.COM



"It's important to remember that correlation does not imply causation. Besides, we all know it was Brian."



## Nobody: Dads: Hey look, a Chemistree!



#### **Climate change hits New York.**





Theory is when you know everything but nothing works.

Practice is when everything works but no one knows why.

In our lab, theory and practice are combined: Nothing works and no one knows why.

111

ABO

THALS

A recent study suggests a negative correlation between intelligence and how much TV a person watches. Since correlation does not imply causation, I suspect that the more TV someone watches the less intelligent they become.







## you are here, crying in the shower before work









"Either there's a spider on the lens, or we need to call somebody."









"For centuries I throw lightning bolts down there. And one day I accidentally hit this Franklin guy's kite and all of a sudden he's 'discovered' electricity?!"
# Gambling is a tax

# on people



# who are not good

# 

# arithmetic.

- M. E. Kabay PhD (1976) in Applied Statistics!









"You're a herpetologist? Would you mind having a quick look at something for me?"





"Gary, the other astrophysicists have asked me to talk to you about your constant humming of 'Twinkle Twinkle Little Star."



"Sure, I'm scared. But the ichthyologist in me is kind of thrilled."

3:21 PM



#### Baby, Do you love me?

Yes, i love you very much









Wahoo 😂 i am weak in math but that must be large number 😂



WELCOME TO MIT ADMINISTRATION, PRESS vn+1 cos(k8x)-i c8+ sin(k8x)

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"Ok. Yep, there it is. Someone mixed up the maze specimens with the growth hormone trials."

@ MAZK ANDERSON, WWW.ANDERTOONS.COM HO ,CH2 H3C 0t HO. HOI OH 0= 40 CH204 CH2 CH 04 40 BQ 01 OH OH OH

"No, that's my coffee order."

## Why do eggs come in flimsy cardboard cartons...



#### ...whereas batteries come in packages that need a chainsaw to open them?





Economists and weather-forecasters are the only people who can earn a living without ever having to be right.



# Why can't we hear a pterodactyl going to the bathroom??

## **Because the P is silent.**





- Mark Gunkel

# What happens if someone slaps you at high frequency...?

# ertz

#### To my fellow high-school science nerds: try betting the jocks that the following is true.



#### "There are more hydrogen atoms in a single molecule of water than there are stars in the entire Solar System."

#### Betcha it'll work!

- M. E. Kabay

## Stone

### Sttwo



## People who don't understand genetics...



# ...are surprised when heavily tattooed couples have a blank baby.

#### Fahrenheit



A chemist, a physicist and an economist are on a flight that crashes into the South Pacific. The three survivors swim to a little desert island where they find a coconut tree and one can of tuna.

The chemist immediately starts figuring out how use the chemicals from coconut milk to corrode the can so they can open it.

The physicist thinks about exactly how to use a piece of coral to puncture the can without spilling any of the contents.

The economist looks at them in amazement and asks, "Um, let's just assume we have a can opener!"

## THE TEST



Scientists at Rolls Royce built a gun specifically to launch dead chickens at the windshields of airliners, and military jets, all travelling at maximum velocity.

The idea is to simulate the frequent incidents of collisions with airborne fowl to test the strength of the windshields.

American engineers heard about the gun and were eager to test it on the windshields of their new high-speed trains. Arrangements were made, and a gun was sent to the American engineers.

When the gun was fired, the engineers stood shocked as the chicken hurled out of the barrel, crashed into the shatterproof shield smashing it to smithereens, blasted through the control console, snapped the engineers back rest in two and embedded itself in the back wall of the cabin, like an arrow shot from a bow.

The horrified Yanks sent Rolls Royce the disastrous results of the experiment, along with the designs of the windshield and begged the British scientists for suggestions.

Rolls Royce responded with a one-line memo:

"DEFROST THE CHICKEN."





#### THE PURIST

I give you now Professor Twist, A conscientious scientist. Trustees exclaimed, "He never bungles!" And sent him off to distant jungles. Camped on a tropic riverside, One day he missed his loving bride. She had, the guide informed him later, Been eaten by an alligator. Professor Twist could not but smile. "You mean," he said, "a crocodile."

- Ogden Nash





Brian Roemmele @BrianRoemmele

In 1663, the partial fossilised skeleton of a woolly rhinoceros was discovered in Germany. This is the "Magdeburg Unicorn", one of the worst fossil reconstructions in human history.



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"Hey, what's this 'uprising' on the calendar for Friday?"







# I defragged my zebra