

Developing Creative Methods of Science
Communication in a Modern World

MOVIN' RIGHT ALONG

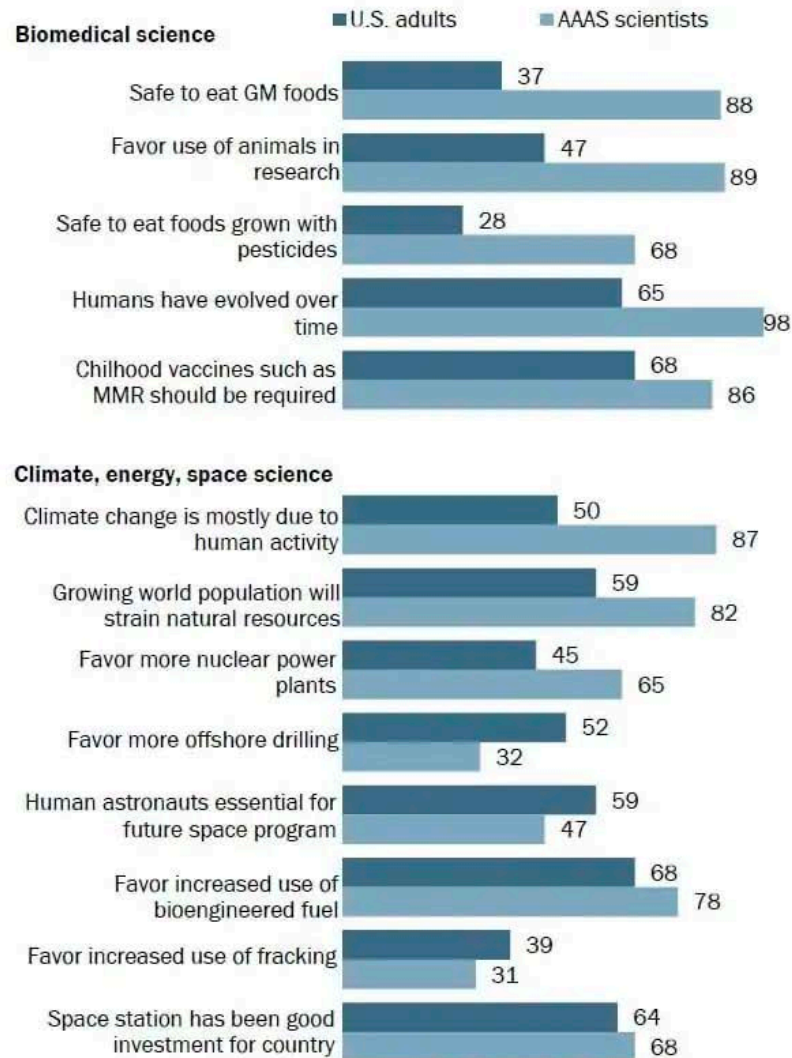
Charity Southworth

Science Literacy in the U.S.

- ⦿ Test lower in academics than many first world countries
- ⦿ Focus on Adults
- ⦿ Science Literacy > Critical Thinking Skills
- ⦿ Science literacy is immensely dependent on demographic

Opinion Differences Between Public and Scientists

% of U.S. adults and AAAS scientists saying each of the following

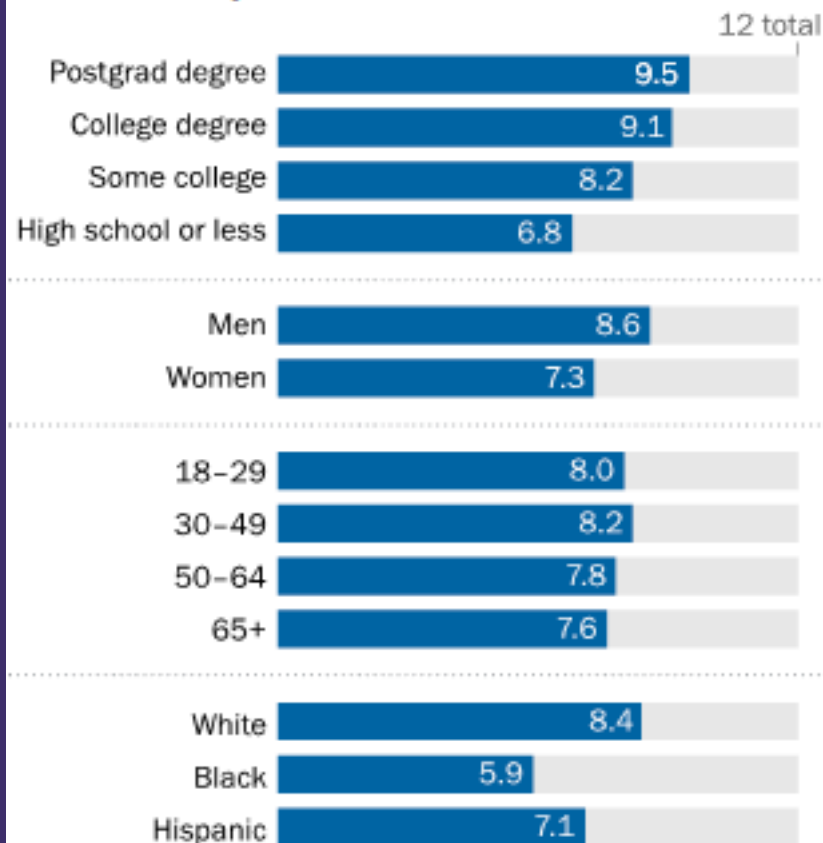


Survey of U.S. adults August 15-25, 2014. AAAS scientists survey Sept. 11-Oct. 13, 2014. Other responses and those saying don't know or giving no answer are not shown.

PEW RESEARCH CENTER

Science Knowledge Varies by Education and Demographic Factors

Mean number of correct answers



American Trends Panel (wave 6). Survey of U.S. adults conducted Aug. 11-Sept. 3, 2014. All questions are multiple-choice; for full wording see survey topline. Whites and blacks include only non-Hispanics; Hispanics are of any race.

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My Background



Current State of Science Communication

- ⊙ Largely Text Based
 - NYT Science
 - Wired
 - Astronomy
 - National Geographic
 - Popular Mechanics
 - IFL Science
 - Science.com

Current Trends in Communication Amongst Young Adults (16-38)

- ◎ Largely Visual Based
 - Listicles (i.e. BuzzFeed)
 - Memes
 - Web Comics
 - Short Interviews
 - YouTube Channels
 - NowThis
 - Easily shared on social media
 - Short and digestible

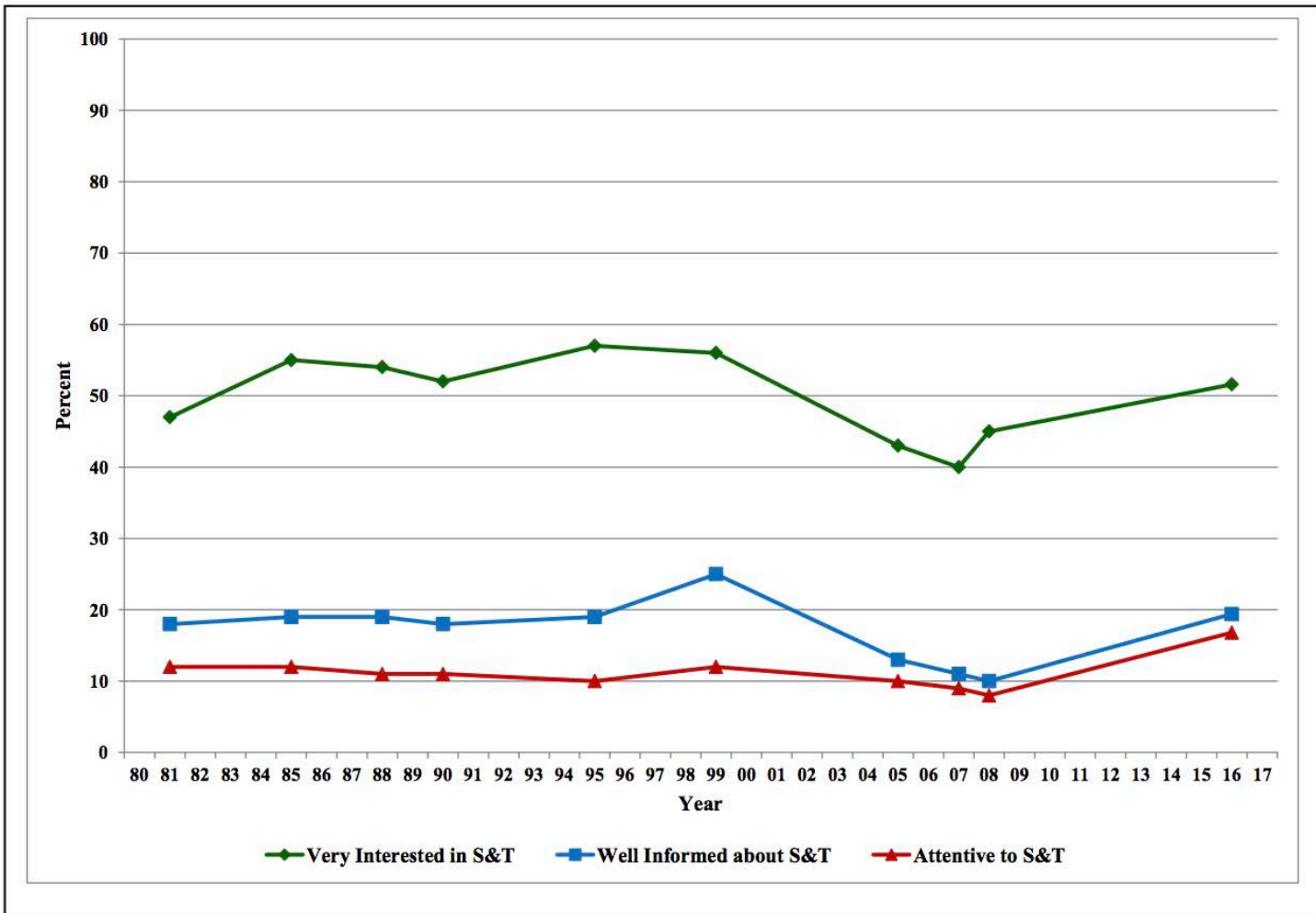


Figure 1: Interest in and Attentiveness to Science and Technology: 1981-2016.

The Oatmeal

How
THE MALE ANGLER FISH



gets completely
SCREWED

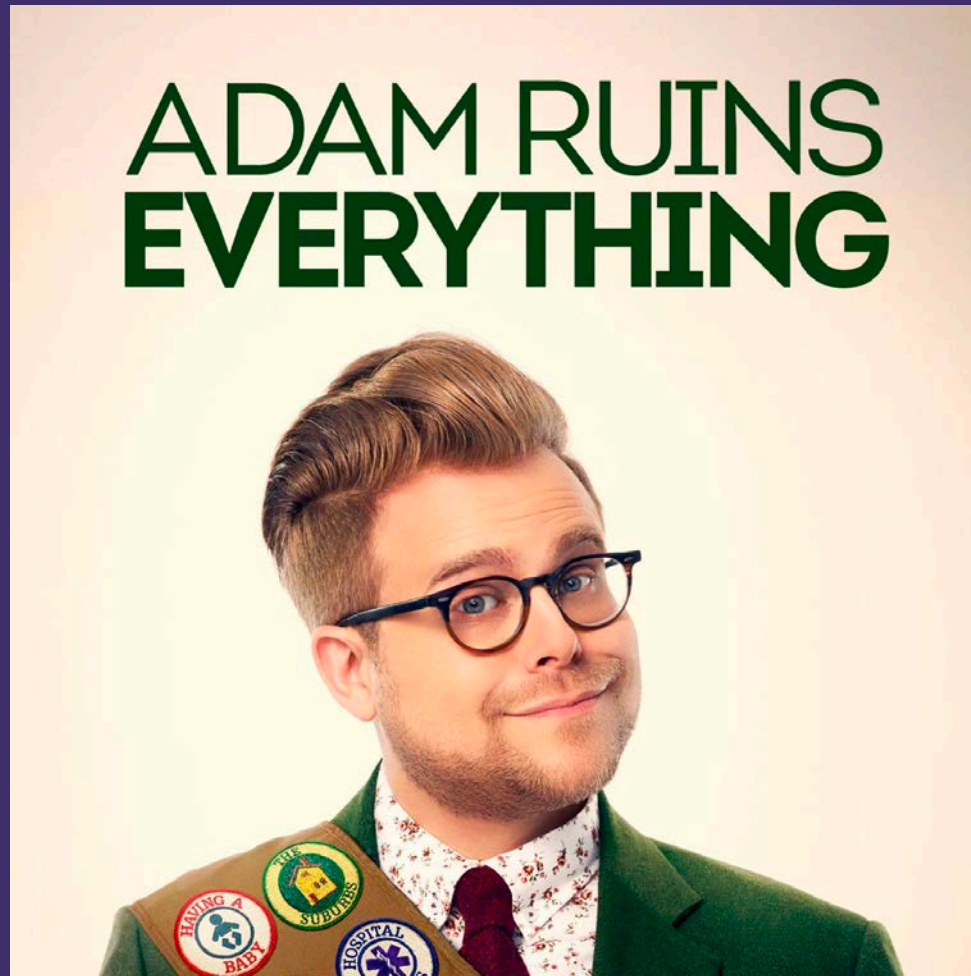
THE OATMEAL

[HTTP://THEOATMEAL.COM](http://THEOATMEAL.COM)

Drunk History



Adam Ruins Everything



Mythbusters



Who are the scientists “everyone” knows of?

- Neil deGrasse Tyson
- Bill Nye
- Michio Kaku
- Bill Gates
- Brian Cox
- Elon Musk
- “That girl from the black hole”

Ideal Science Communicator

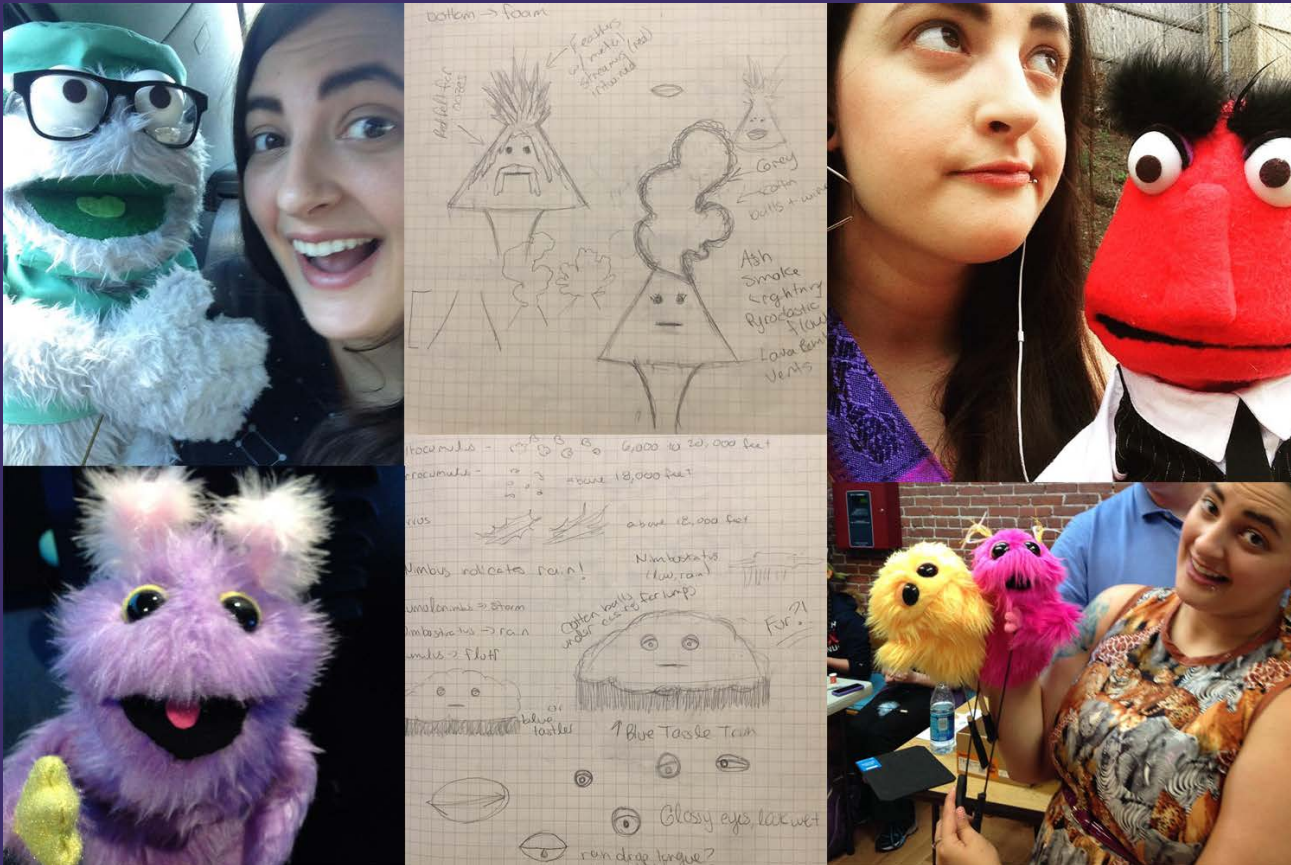
- ⦿ Welcoming Nature
- ⦿ Diversity within Academia
- ⦿ Don't "talk down"
- ⦿ Empathetic to lay persons' perspective
- ⦿ Takes advantage of social media
- ⦿ Important because they control knowledge, how it is shared and who it is shared with
- ⦿ Free of elitist or classist bias*

My Journey in CCT

- ⦿ Putting away my differences with academia
- ⦿ Be The Change I want to see
- ⦿ I have a unique perspective
- ⦿ Weight of it all
- ⦿ It is okay if learning is small

Oh, Hello Science

A scientist and her friend Science explore science concepts in their everyday, humorous life.

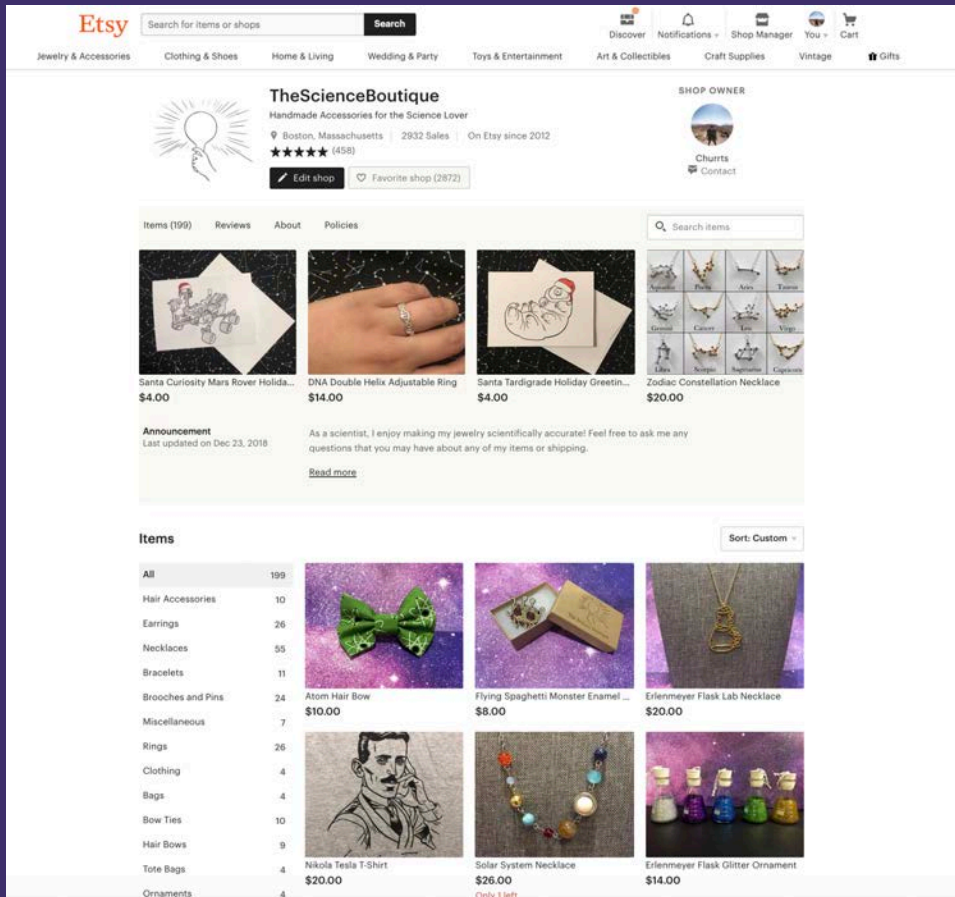


Science Ain't a Drag

Drag personalities sit down with a scientist and talk science over bottomless mimosas.



The Science Boutique



The screenshot shows the Etsy shop page for 'TheScienceBoutique'. The shop is located in Boston, Massachusetts, and has 2932 sales and a 5-star rating from 1458 reviews. The shop owner is Churrt. The page features a search bar, navigation tabs for various categories, and a grid of science-themed items. An announcement at the top of the items section reads: 'As a scientist, I enjoy making my jewelry scientifically accurate! Feel free to ask me any questions that you may have about any of my items or shipping.' Below this, a list of items is displayed with their prices and a 'Sort: Custom' dropdown menu.

Item Name	Price
Santa Curiosity Mars Rover Holiday Greeting Card	\$4.00
DNA Double Helix Adjustable Ring	\$14.00
Santa Tardigrade Holiday Greeting Card	\$4.00
Zodiac Constellation Necklace	\$20.00
Atom Hair Bow	\$10.00
Flying Spaghetti Monster Enamel Pin	\$8.00
Erlenmeyer Flask Lab Necklace	\$20.00
Nikola Tesla T-Shirt	\$20.00
Solar System Necklace	\$26.00 (Only 1 left)
Erlenmeyer Flask Glitter Ornament	\$14.00



The Science Boutique

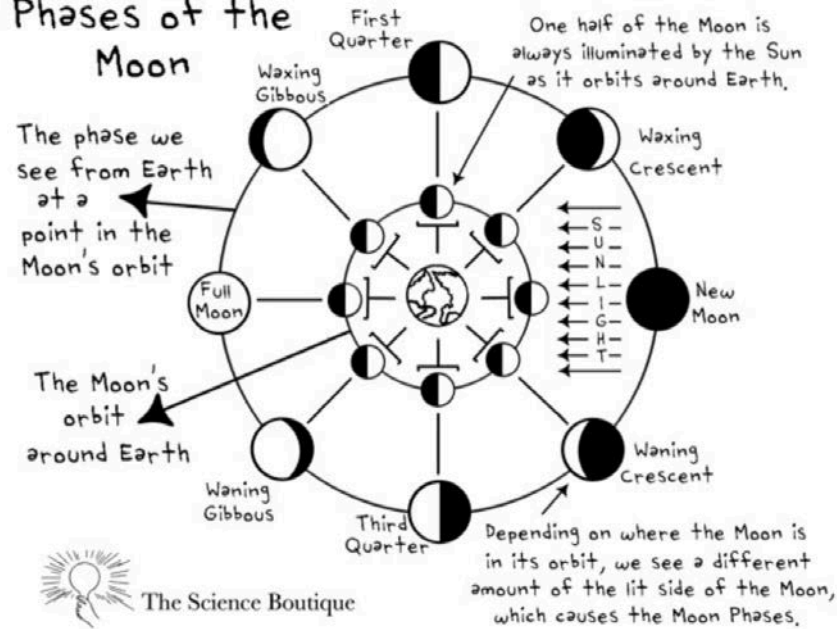
Schrödinger's Cat Double Ring



Erwin Schrödinger first proposed this thought experiment in 1935. It is complicated, I will leave it at that. This double ring shows both a dead and alive cat and would look great with a Schrodinger's cat Necklace!



Phases of the Moon



The Science Boutique

THE ASTRONIST



Web-Comics

The death of massive stars

Massive stars have a mass of 8 or more solar masses and expand to red supergiant stars towards the end of their lives.

Red supergiants are about 1,500 times the size of our Sun on average.



Eventually gravity will cause the star to quickly collapse!

The outer layers are violently blown off in a huge explosion called a type II supernova.

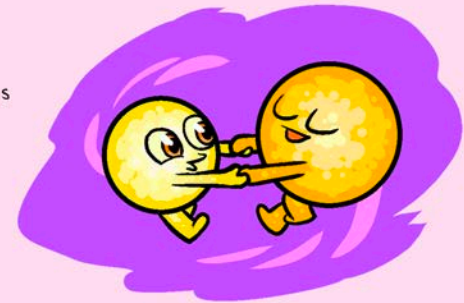


A type II supernova can be as bright as 100 million Suns!

Type Ia Supernovae

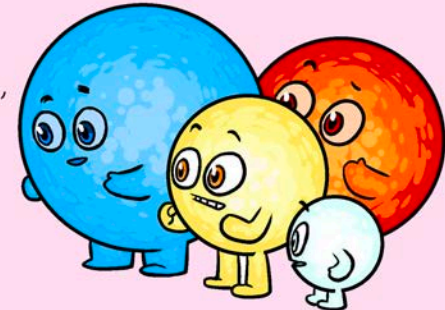
Type Ia supernovae occur in binary star systems. Binary stars orbit around a common center of mass.

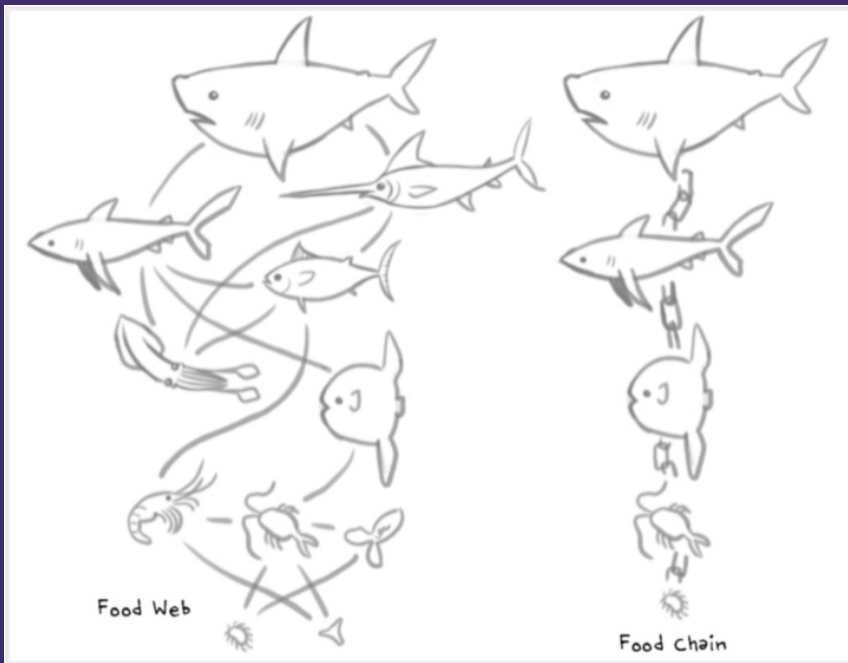
More than half of the stars near our Sun are in binary systems!



In order for a type Ia supernova to happen, one of the stars HAS to be a white dwarf - the remnant of a star like our Sun!

The white dwarf's companion star can be any type of star, even another white dwarf!

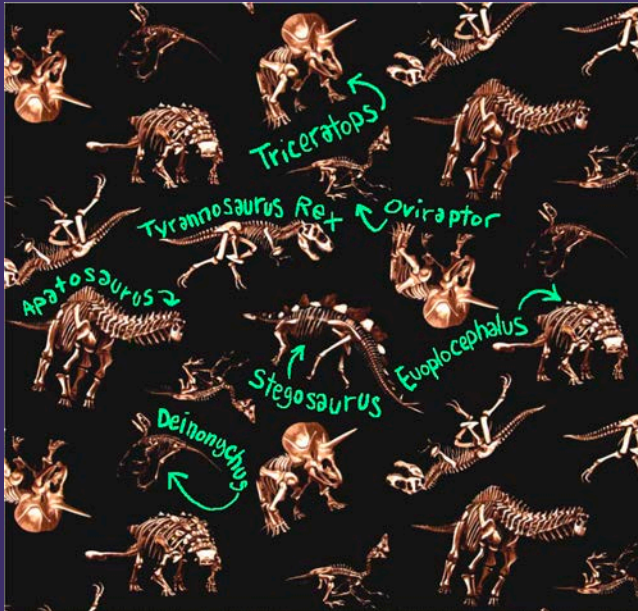




Parasites are definitely unwelcomed guests to their host.



“Outfit of the Day” Posts



Stegosaurus "roofed lizard"

- ▶ 20-24 feet long, 10 feet tall
- ▶ Fossils found in North America
- ▶ Lived during the Jurassic period
- ▶ Herbivore

Its spiked tail is called a thagomizer!
The brain of a stegosaurus is the size of a walnut.

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(LEFT TO RIGHT): KELVIN AITKEN/WPICS VIA AP IMAGES, IAN ALLEN, NATIONAL PARKS OF LAKE SUPERIOR FOUNDATION

Top stories: A box jellyfish antivenom, the quest for the color blue, and Isle Royale's new wolves

By Alex Fox | May 3, 2019, 1:20 PM

Researchers may have an antidote for the deadliest jellyfish sting on Earth

The sting of a box jellyfish can kill a person in minutes. Scientists have long sought to figure out the secret of its fast-acting venom, which also causes agony, inflammation, and heart attacks. A new study may have the answer—and a potential antidote.

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BY MEREDITH WADMAN | MAY 2, 2019

Shake-up at NIH: Term limits for important positions would open new opportunities for women, minorities



Expert in Your Zeal A Line Dress

By ModCloth

\$79

1217

★★★★☆ 4.3 | 3 Reviews



Navy



XXS XS S M L XL 1X 2X 3X 4X

True To Size [Find Your Fit](#)

Availability: [Select Styles for Availability](#)

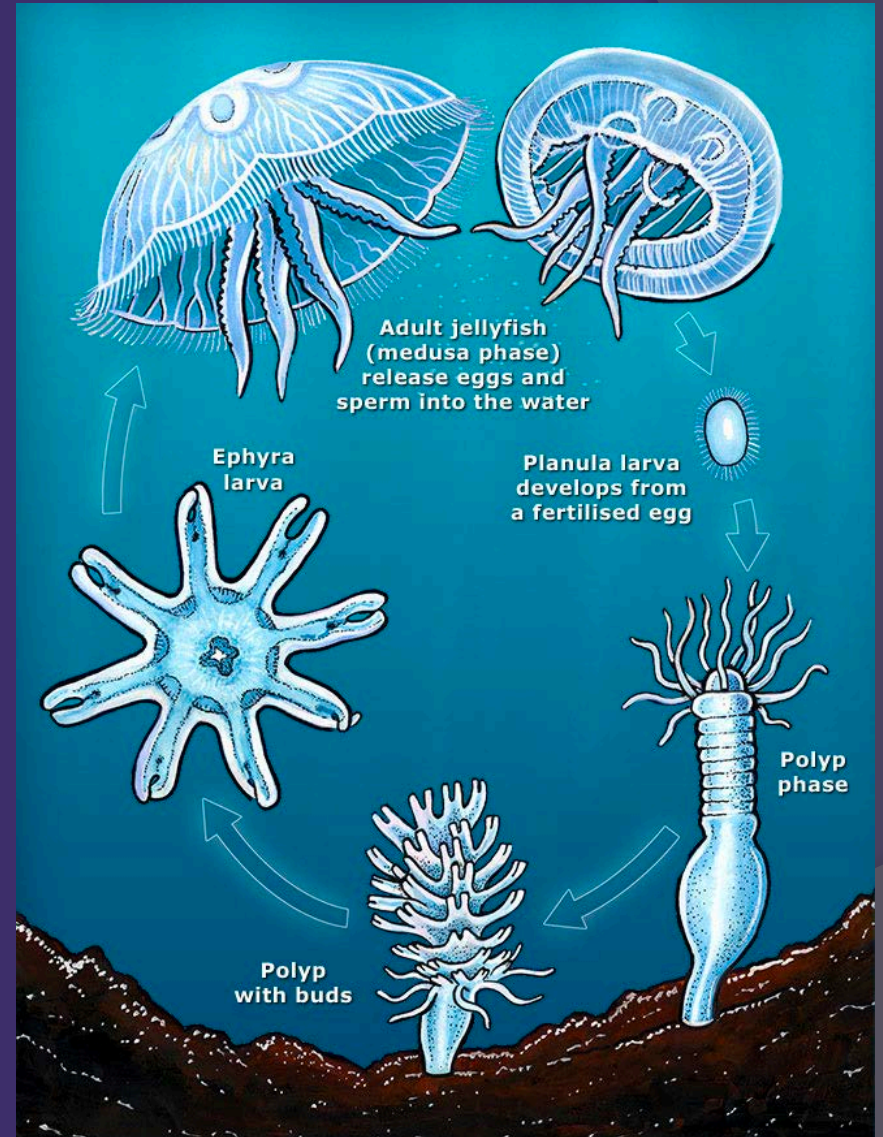
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[Save to Wishlist](#)

Description Details Size Chart

Item No. 164470

Your boundless knowledge pulls your trivia night team to first place, and in this navy blue dress from our ModCloth namesake label, you make the celebration look stylishly sweet! This tied-back A-line features a pintucked, buttoned front, flutter sleeves, and an exclusive, hand-drawn print of pink and purple jellyfish that have all eyes on you and your victory toast.





Slim-Fit Built-In Flex Printed Everyday Shirt for Men

\$16.00 - \$26.99

★★★★★

4.8 (215)

Hot Deal

Color: **Jellyfish**

~~\$26.99~~



~~\$26.99~~

\$24.00



~~\$26.99~~

\$23.00



~~\$26.99~~

\$21.00



~~\$26.99~~

\$20.00



~~\$26.99~~

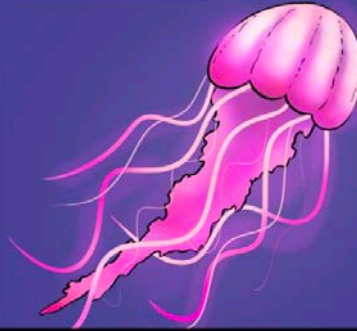
\$19.00



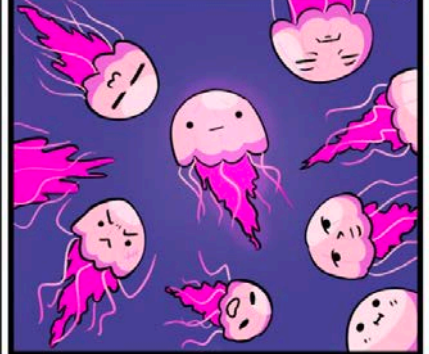


EXISTENTIAL JELLYFISH

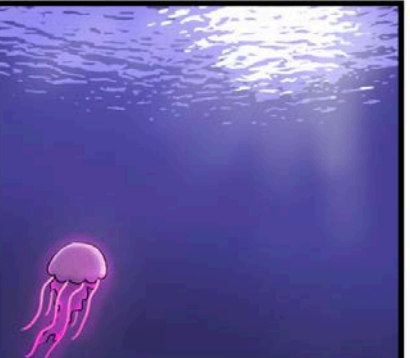
As a simple jellyfish,



I don't feel much of anything.



Know what stings the most?



I want to feel something.

Take-away

- ⦿ Human connection allows people to hear information differently
- ⦿ Couch science within humorous content
- ⦿ When entertained, it isn't strenuous to learn new things
- ⦿ Young adults want to know more science
- ⦿ Take advantage of social media

Movin' Right Along



Questions & Comments