



Communicating with the General Public About Fisheries Science



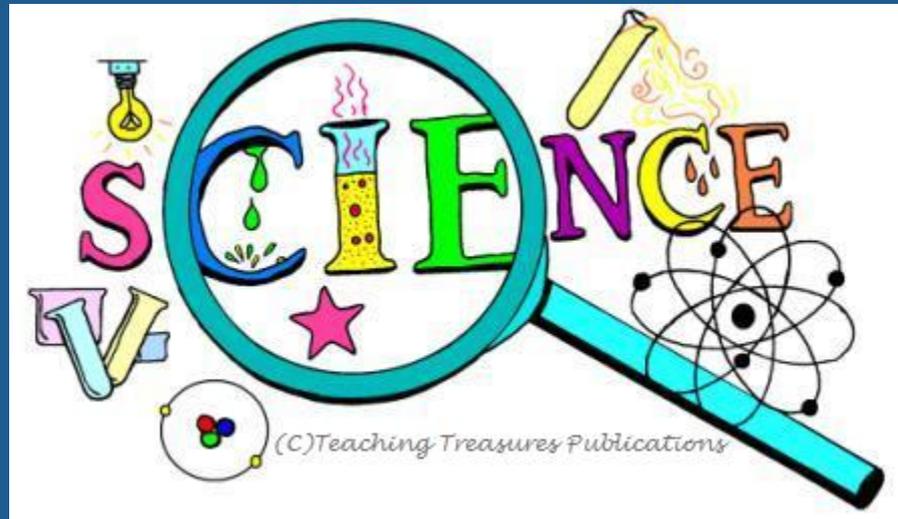
NOAA
FISHERIES

Greater Atlantic Regional
Fisheries Office

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Why are we talking about communicating science to the general public?



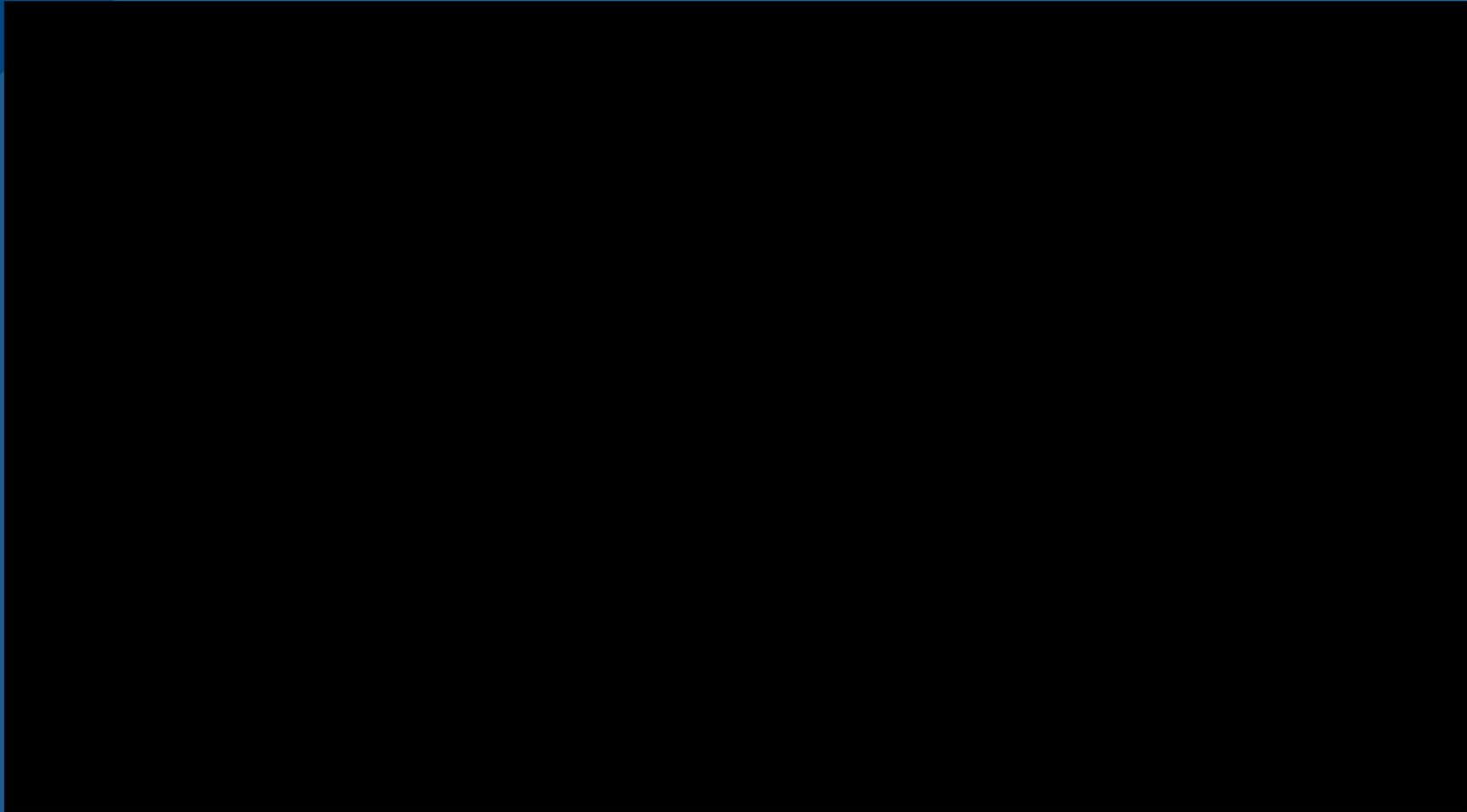
What are they saying?

- As with the progenitor of the scion, in such similar manner it may occur with the scion.
- Pulchritude does not penetrate below the dermal plane.
- Lithodial fragments ought not to be forcibly projected by inhabitants of vitreous abodes.
- A perissodactyl ungulate may be propelled toward a body of aqueous fluid, but such ungulate cannot be compelled or forcibly induced to imbibe such fluid.





Why are we talking about communicating science to the general public?





Coming from our perspective:

The minute we understand something, we forget what it was like not to know it. So the road to clarity lies in our ability to remember and feel what it is like not to know when communicating new information to others.

Angela Morelli



To the Editor:

Brent Staples (Editorial Observer, May 15) concludes that "what we need now is a revolution in writing instruction." As the co author of a book on business writing, I agree. And I'd go even further. We need a revolution in what passes for good writing in papers and exams in our best colleges.

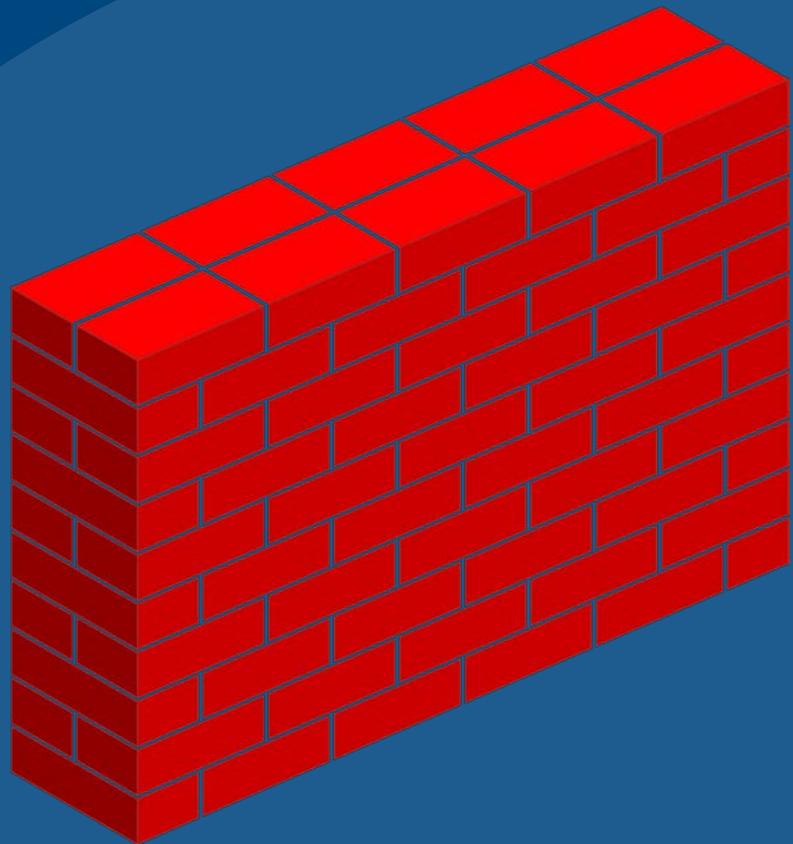
At the University of Michigan, my son, brainwashed by me in the virtues of writing clearly and simply, found that when he used plain words and simple sentences to express specific thoughts, he got poor grades. So he adopted academic jargon and ornate syntax, became deliberately ponderous and vague, and got B pluses and A's.

His successful effort to write poorly helped him graduate magna cum laude.

Joel Raphaelson
Chicago, May 15, 2005

From the *New York Times* of May 31, 2005

Barriers to Communication



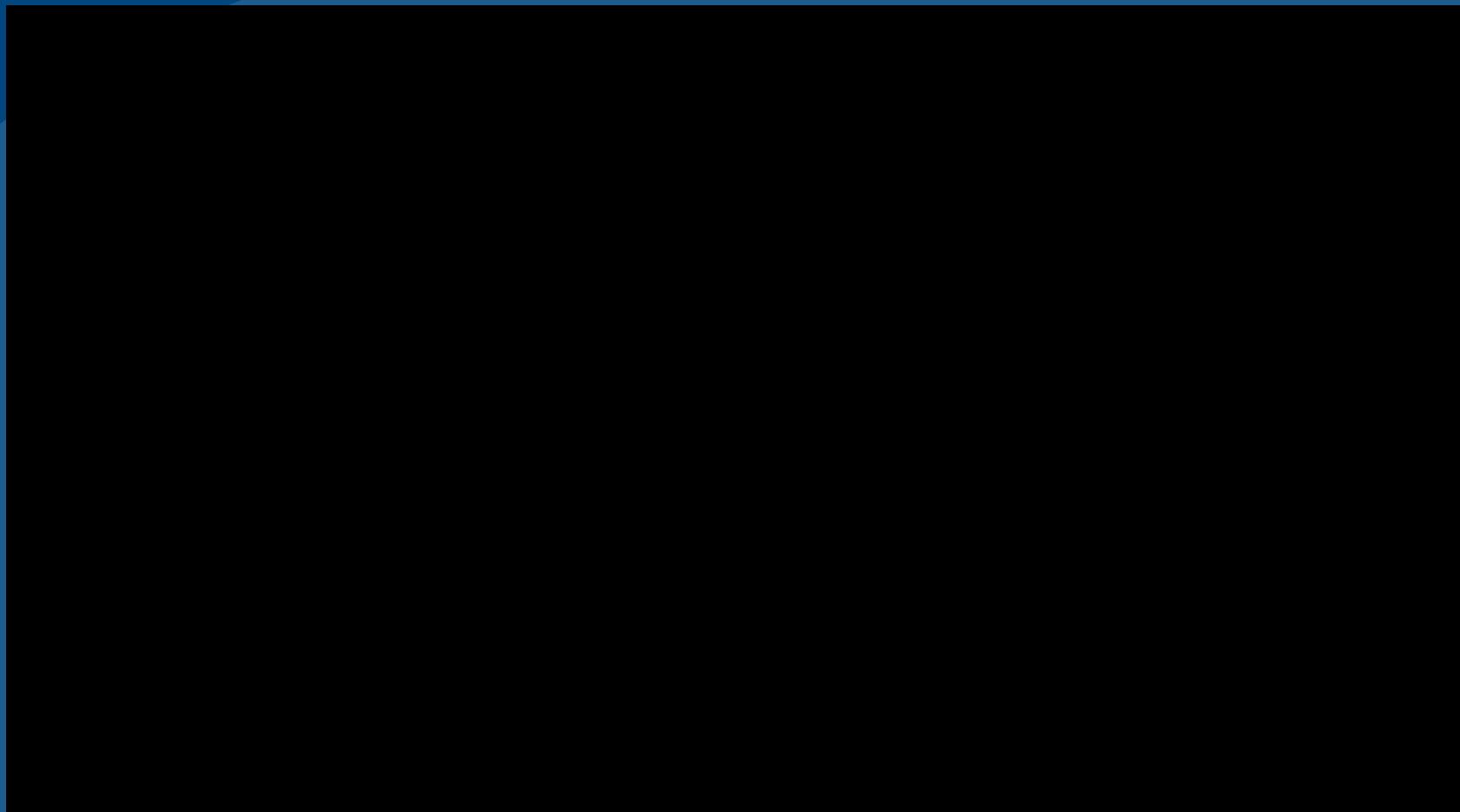
1. Language

2. Context

3. Detail



Talk Nerdy to Me by Melissa Marshall



Getting Started



Think Before You Start Writing

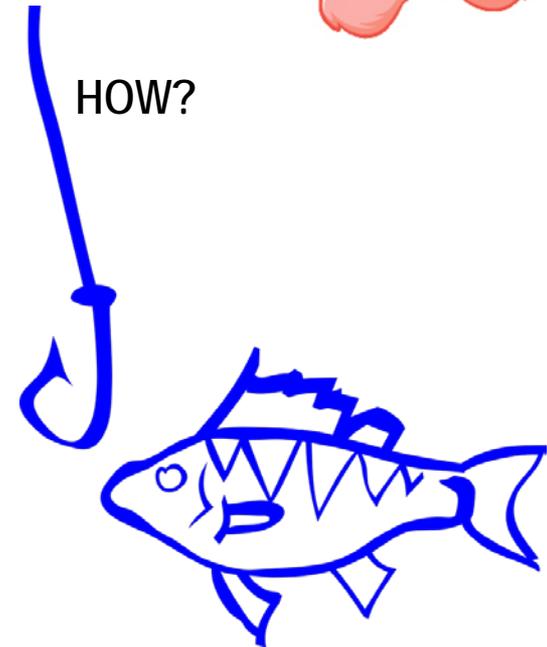
WHO?

WHAT?

WHY?



HOW?



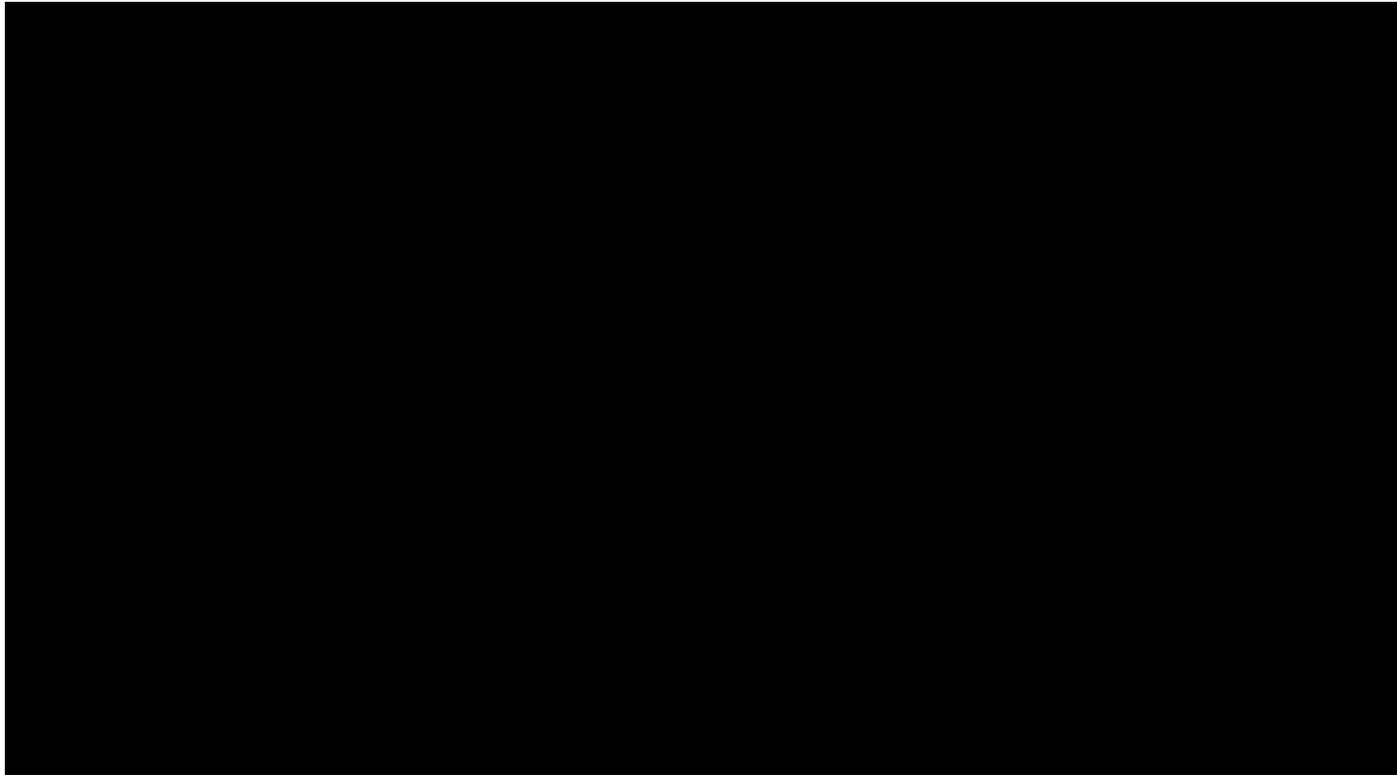
What do you mean by a hook?

1. Curiosity/Intrigue. *About a month ago, to my embarrassment, I learned I'd been tying my shoelaces wrongly my whole life.* (from The Guardian)
2. Question: *What are the seven mistakes spellchecker won't catch?* (Blog post from GoodContent.com)
3. Empathy toward a common problem: *Have you even been stuck in bridge construction traffic and wondered what is taking them so long?*
4. Use a quote or interesting statistic: *Did you know 77% of statistics are made up on the spot?*
5. Disrupt expectations: *It was a bright cold day in April, and the clocks were striking thirteen.* (George Orwell, 1984)
6. Delete your first paragraph
7. Start in the middle of your story: *The slippery fish wriggled out of my hands, tag only partially attached.*



Step 1: Create a Strategic Outline

1. Who is your audience?
2. What is your platform?





Step 1: Create a Strategic Outline

1. Who is your audience?
2. What is your platform?
3. How much space do you have?
4. What do you want to tell them?
5. Why should they care?
6. How are you going to hook them?



Step 2: Writing

1. Language – Use plain English

- Logical organization
- “You” and other pronouns
- The active voice
- Common, everyday words
- Short sentences
- Lists and tables

Avoid verbs disguised as nouns

Don't say...

Do say...

Conduct an analysis

Analyze

Present a report

Report

Conduct an assessment

Assess

Provide assistance

Assist

Perform an evaluation

Evaluate

Shorter ways of saying...

- At the present time
- Due to the fact that
- Effect modifications
- In a timely manner
- In the event that
- Set forth in
- Until such time as
- Now
- Due to; because
- Change
- On time; promptly
- If
- In
- Until

Plain language is not –

- Writing less precisely
- “Dumbing down”
- Writing to a certain grade level
- Attempting to be folksy or too informal
- Leaving out necessary technical terms

What is the passive voice?

When the action comes before the actor. When who does the what?

- Results were obtained.
- The road was crossed by the chicken.
- The Kessel Run was made in less than twelve parsecs by the Millennium Falcon

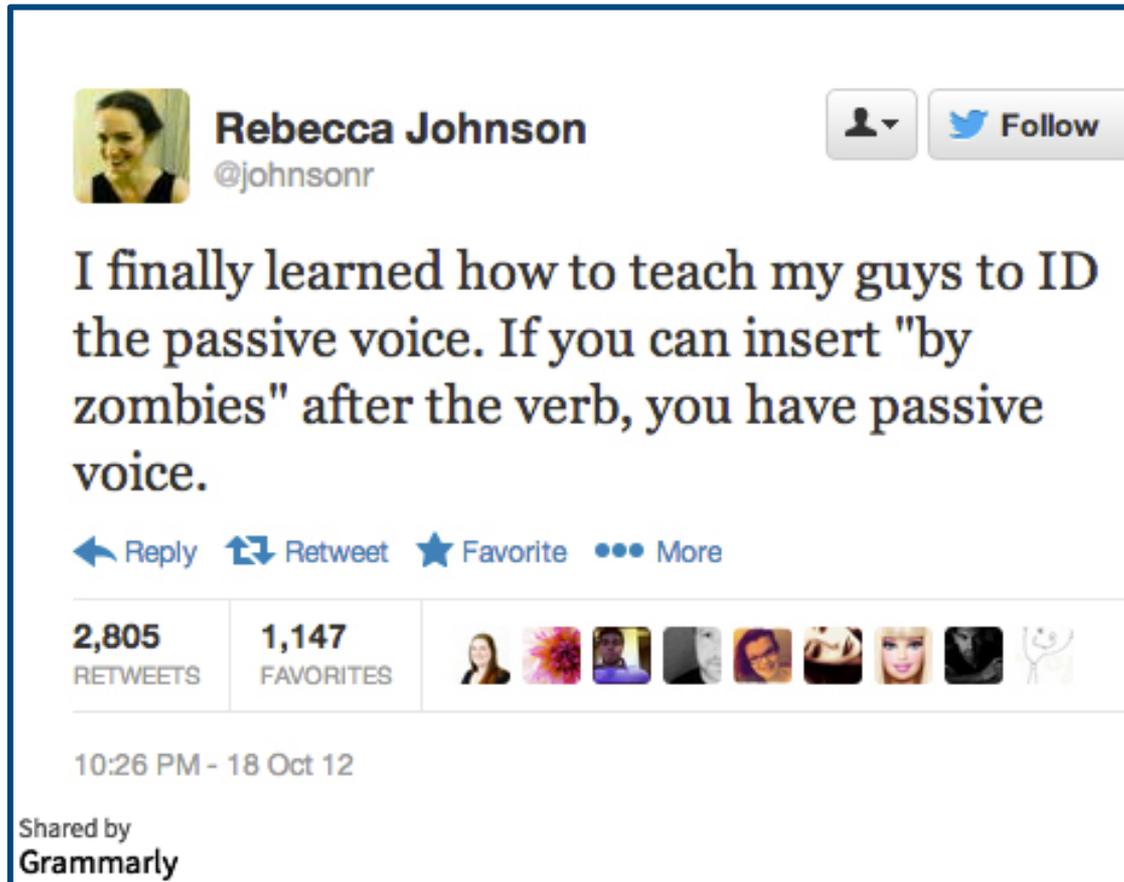
Sure-fire test:

form of “to be” + past participle = passive voice

Passive Voice Exercise

A	B	C	D
1. was written	will write	has written	is writing
2. shall deliver	may deliver	is delivering	is delivered
3. has sent	were sent	will send	are sending
4. should revoke	will be revoking	have revoked	to be revoked
5. were mailing	have been mailed	having mailed	will mail
6. may be requesting	are requested	have requested	will request

Scary-Easy Way to Tell



A screenshot of a tweet from Rebecca Johnson (@johnsonr) on October 18, 2012, at 10:26 PM. The tweet discusses a method for identifying passive voice by inserting "by zombies" after the verb. The tweet has 2,805 retweets and 1,147 favorites. The interface includes a profile picture, name, handle, and a "Follow" button. Interaction buttons for Reply, Retweet, Favorite, and More are visible below the text. A row of user avatars is shown below the statistics. The tweet is shared by Grammarly.

 **Rebecca Johnson**
@johnsonr Follow

I finally learned how to teach my guys to ID the passive voice. If you can insert "by zombies" after the verb, you have passive voice.

[Reply](#) [Retweet](#) [Favorite](#) [More](#)

2,805 RETWEETS **1,147** FAVORITES

10:26 PM - 18 Oct 12

Shared by **Grammarly**

Can you ever use the passive voice?

Short answer: YES.

Example	Doer
Your car has been stolen	Doer unknown
Presidents are elected every four years.	Doer obvious
Her outfit was covered with glitter.	Doer doesn't matter
All annual leave has been cancelled	Doer better left unnamed
The report should have been done by now	Avoids direct attack



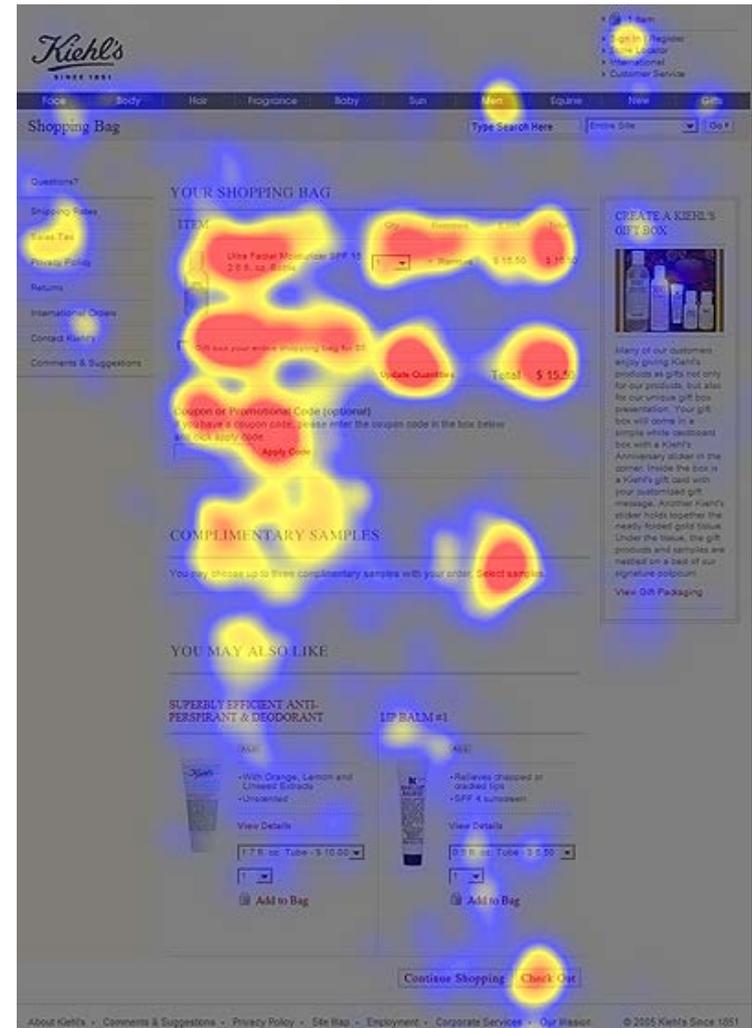
Step 2: Writing

1. Language – Use plain English
2. Use the active voice
3. Use short sentences
4. Keep your paragraphs short
 - On the web, this can be one or two sentences

Web Writing

- Online readers focus on headings and bulleted lists of information
- Online readers read 25% more slowly
- Cut out 50% of your text

Image from Nielsen Norman Group usability eye tracking test (2006)



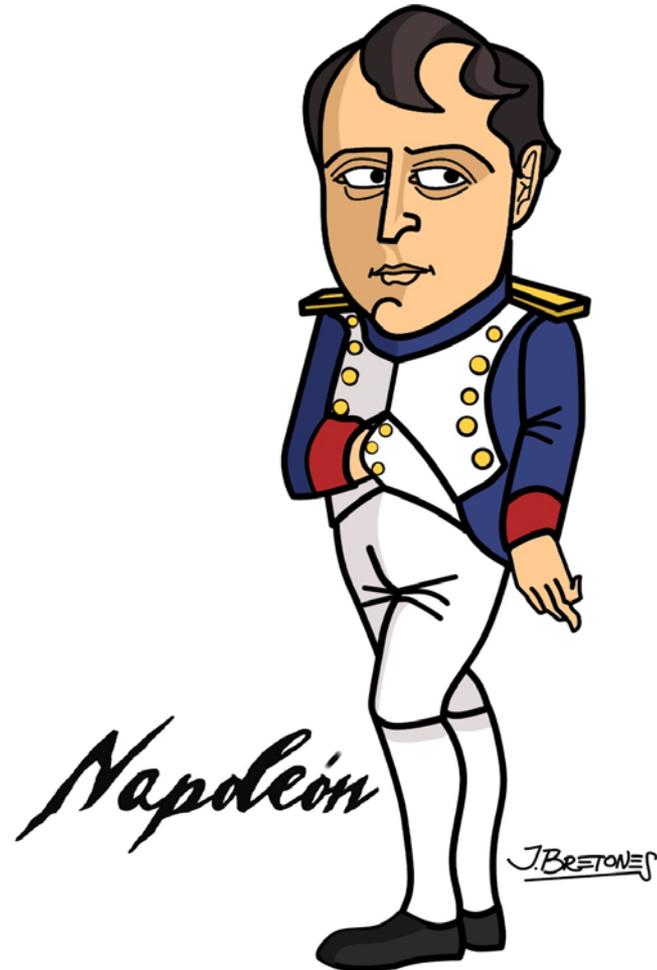
The Benefits of Being Short

Most visitors scroll through about only 50-60% of an article page.

Jakob Nielsen's eye-tracking study from 2008 indicated that less than 20% of the text content is actually read on an average web page.

Concise, scannable and objective copywriting resulted in 124% better usability.

If people find the very piece of information they are interested in, they are likely to read the whole story.





Step 2: Writing

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5. Use headings
6. Use specifics



Use Specifics

Telling: My dog is talented.

Showing: My dog has a vocabulary of about 100 words, competes in frisbee tournaments, and can bring me a beer when I ask him.

Telling: Atlantic salmon are an iconic New England species. In addition to the ecosystem role these fish play, they been an important indicator of economic health in our region.

Showing: The story goes that since 1912, when a fly-fisherman decided to send the first salmon to President Taft, anglers have presented each sitting U.S. President with the first wild caught salmon of the season from the Penobscot River. According to historical records, annual salmon runs on the Penobscot may have been upwards of 100,000 adults, before hydropower companies installed large dams on the river in the 1830s. In May 1992, Claude Westfall presented a 9.5 pound Atlantic salmon to President George H.W. Bush. Westfall's was the last presidential salmon. The Atlantic salmon had commercial fishery closed in 1948, and the recreational fishery, with its bag limit of one per person per season in 1993, would soon shut down.

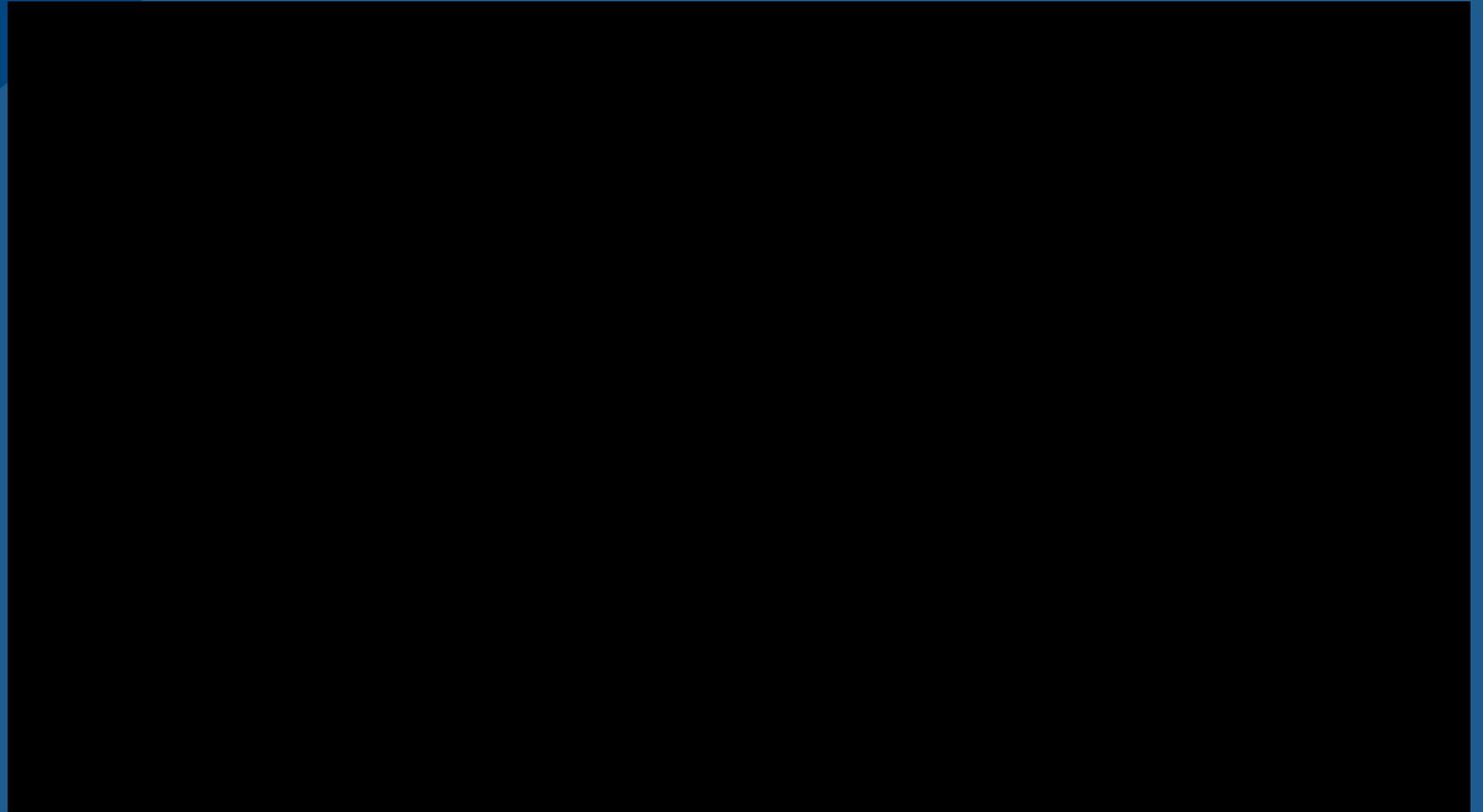


Step 2: Writing

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6. Use specifics
7. Tell a story



Using Storytelling in Science





Using Storytelling in Science

- Think about the “why” of what you do.
- Put a person in it. Doesn't have to be a human person.
- Stories are not series of facts. Something happens in a story.
 - Protagonist
 - Interacts with antagonists/faces a problem
 - Solves the problem/resolves the conflict.



Kill Your Darlings

Everything that isn't driving the story forward; everything that you're putting in because you feel you owe it to the sources, rather than the reader.

As a writer, it can be impossible to know what to leave out because you fall in love with your own story. (I've written whole sections that I knew were unlikely to make it into a story, just because I had to get them out of my system.)

Editors are there to help you cut out the fat.

– Helen Pearson, Science Writer



To Recap:

- Break down barriers: language, context, detail.
- Connect with or “hook” the reader
- Tell a story where something happens
- Use plain English
- Use details
- Make it as simple as it can be, but no simpler

Now that you've written your first draft:

- Come up with a catchy title! Use plays on words, alliteration, pop-culture references.

"Nifty ways to leave your lover: The tactics people use to entice and disguise the process of human mate poaching."

- Provide images (with credit and caption info)
- Include contact information or website for more info
- Add graphics or maps to get key points across – but keep these simple too!
- If a web story, include links to more detailed information (swimmers vs divers)



The Review Phase

- Have a peer unfamiliar with the subject review
- Keep an open mind to other's suggestions
- Go through proper clearance channels
- Be aware of your organization's policies and procedures for publishing and posting
- Make sure the right folks inside and outside your organization are in the loop – No surprises!





PROOFREAD!

Are you a good proofreader? Don't trust your spellcheck completely!

When Apple Corps launched their first iPhone in 2008, it didn't dissappoint. In fact, it immediately captured the collective imagination with a geeky allure driven by Apples slick design, the phone's smart flexibilty and it's inovative multi-touch approach.

When **Apple** launched **its** first iPhone in **2007**, it didn't **disappoint**. In fact, it immediately captured the collective imagination with a geeky allure driven by **Apple's** slick design, the phone's smart **flexibility** and **its innovative** multi-touch approach.



Things to watch out for:

- You'll change things as you proofread - run a spell check at the end
- Read your story all the way through, checking for spelling, punctuation, and grammar.
- If you are unsure of something, look it up!
- Fact check.
- Are your capitalizations correct and consistent?
- Are you using quotation marks correctly and not for emphasis? (No air quotes!)
- Check all your apostrophes. Are you using any of them to make something plural? Don't do it!
- Check all your homophones: they're, their, there
- Do all of your links work and are your email addresses correct?
- Get rid of double spaces after a period or anywhere, for that matter.
- Finally, run that spellcheck one last time!



The Final Product

- How are you going to share the product internally and externally?
- Plan for any sensitivities
- Think about follow-up metrics (measure of success)
 - Google Analytics
 - Constant Contact opens
 - Social Media (shares, re-tweets, etc.)
 - Press Inquiries

Exercise

Give us your hook!
Tell us your story.

