Tell us about yourselves

- How many are faculty? Postdocs? Grad students? Staff?
- Do you write something almost every day? Less frequently?
- Do you use social media?
- How much do you enjoy writing?
  - Better than a day at the beach
  - Rather have a root canal
  - Somewhere in between

Good science writing = big issue
Good writing matters

- Effective communication is key to success
  - To convey your ideas, findings, viewpoints
  - To reach target audiences
  - To explain importance of your work

- Ineffective communication costly
  - Lost opportunities for funding, publishing, awards, understanding
  - Diminished perception of work’s value
  - Potential misunderstanding of your research
  - Reputation, recognition

Remember key differences

- Research/Science focuses on process, methodology, details
- Non-technical writing focuses on outcomes
- While process is important for context, outcome/impact is the bottom line

The difference is key

1. Most important, newsworthy
   (Bottom line, take-home message)
2. Supporting details
   (Who, what, when, where, why, Additional facts)
3. Less vital info
   Results, outcomes, conclusions, discussion

NURAMP Presentation, Ashley Washburn & Vicki Miller
Know your audience

- Know who you're trying to reach
  - Public
  - Policymakers
  - Potential or current funders
  - Community or campus leaders
  - Administrators
- What do they know or care about this subject?
- What will they be most interested in?
  - Don't tell them what they "should" want to know
  - Focus on what's most important, interesting to them

Respect your audience

- Audience needs and interests are diverse
  - Gear your message to your audience
  - What resonates with one, may fall flat with another
- But every audience has
  - Limited attention span
  - Limited knowledge, interest
  - Lots of competition for their attention
  - Little patience for off-message info

Style and approach

- Match style and approach to audience
  - Narrative, storytelling or email, report
  - Connect with your audience
- Clear language is critical
- Focus on why readers should care
  - What's in it for them?

Clear, concise communication wins
Translate, translate, translate
- Make it understandable, relatable, approachable
- Understanding is the goal
- Trade details for understanding
- Simplifying is not "dumbing down"
- Remember you are not writing for peers
- No one complains that academics are too easy to understand

Become the narrator and translator of your work.
Tell an interesting story.

Sage advice
"If you can't explain it simply, you don't understand it well enough."

Keeping it simple
- Think big picture
- You can't tell all -- don't try
- Focus on key points/messages
- Provide only essential background, data, details
- Avoid jargon
- Use simple, familiar words
- Keep sentences short
- Don't overwhelm with details -- you'll lose readers
Identify the essentials

- Key components of effective messaging
  - Issue, problem, situation, need
  - What are we doing/proposing to do about it?
  - What difference will it make?
  - Why it matters? (depends on audience)
  - What is the benefit, outcome, possibilities?

The brutal bottom line:
So what, who cares and why?

State problem, what’s being done

Concussions are common contact sports injuries with potentially long-lasting consequences. Although initial symptoms usually disappear within a week, players may suffer cognitive effects for years, especially with severe or repeated concussion.

A research partnership between UNL researchers and Nebraska Athletics is helping expand understanding of concussions, brain function, head injury and human performance. Findings have the potential to influence athletics nationwide and improve treatment and prevention strategies for all types of head injuries.

Familiarize the unfamiliar

- Research and science are mysteries to most people
- Never assume what audiences knows
- Demystify technical info
- Helpful tools
  - Examples that audience relates to
  - Information that paints a picture
  - Explain what it means to them
Familiarize the unfamiliar

Phase transitions refer to changes in a material's properties, often driven by temperature changes. The ubiquitous phase transition of water, which transforms from ice to liquid water to steam as the temperature increases, serves as an excellent example. Pressure significantly alters water's transition temperatures, as anyone who has baked a cake at high altitude well knows. We are investigating the effects of rapidly changing pressure on phase transitions of technologically important magnetic thin film materials by focusing a very fast (ultrasonic) sound wave on the material. ...

By UNL Physicist Shreep Atalwalla
NCNN Interface newsletter

Compare with familiar/state outcome

The same quality that buffers a raincoat against downpours or a pan against sticky foods can boost the performance of solar cells, according to a new study from UNL engineers.

This study showed that constructing a type of organic solar cell on a "non-wetting" plastic surface made it 1.5 times more efficient at converting sunlight to electricity. ...

By Scott Schrage, University Communications
UNL news release

Rule of threes

- Identify three most important points
  - Key takeaways
- Build message around these
- Focus on outcomes, benefits
  - So what, who cares, why important
- Make them compelling
  - Hone, simplify, translate
- Avoid temptation to add more
  - Instead, think of one thing to remove
- Detail trap - more is not better

Clear, concise message

NURAMP Presentation, Ashley Washburn & Vicki Miller
When you write

- Remember the inverted pyramid
- Create compelling first paragraph to grab attention
  - Focus on most important
  - Make it meaningful
  - Don’t over-promise
- Following paragraphs
  - Flesh out info in first paragraph
  - Keep key info high in story
- Never save the best for last
  - Readers may never see it

Choose and use words carefully

- Simple, familiar words are powerful
- Big words don’t make you sound smarter
- Jargon is the enemy of clear communication
- Avoid acronyms, abbreviations
  - If you must, clearly define
- Never assume understanding
- Use active voice, not passive
  - Active: the subject of sentence does the action
  - Passive: the subject receives the action
  - “By” is clue to passive voice

Structure

- Use short sentences and short paragraphs
  - Strive for fewer than 25 words per sentence
  - Ideally, 20 or fewer words
  - New idea = new sentence
  - Avoid semicolons – make it two sentences
- Short paragraphs improve readability
  - Paragraphs can consist of a single sentence
Painting a picture

Short and descriptive
Algae, those slimy, primordial throwbacks often considered a nuisance, could help fuel the future. But we need to know a lot more about them before effectively harnessing them for renewable biofuel. That's what UNL's Nebraska Coalition for Algal Biology and Biotechnology aims to do.

By Gillian Klucars
ORED

When you write/edit

- Read, follow instructions for proposal or publication
- Remember your audience
- Remember the rules of good writing
- Edit for understanding - be clear, concise
- Look for ways to make story interesting to readers
- Review with a fresh eye, ask someone to read if there's time

How will you make your ideas clear, concise and compelling?

Words of wisdom

- "Just because you're dealing with a scholarly discipline that's usually reported in a style of dry pedantry is no reason why you shouldn't write in good, fresh English." - William Zinsser, On Writing Well

- "Write with precision, clarity and economy. Every sentence should convey the exact truth as simply as possible." - Instructions to authors, Ecology, 1964