CFAES

COMMUNICATING SCIENCE: Tips for Communicating Well

Be Clear

- Don't use jargon or acronyms unless you define them first.
- Use metaphors or analogies.
- Use numbers and be explicit.
- Utilize white space to break up text.

Be Concise

- Don't include unnecessary information.
- Revise, revise, revise! If you can eliminate a word, always do.

Make People Care

- Establish credibility.
- Mention stakeholders.
- Discuss your audience's values.

Before you start, always ask yourself:

What is the goal of this communication?

Who is my audience? *Always write with your audience in mind.*

General Rules:

Generalizations	⟶	Details
Known Information	⟶	New Information
Most Important	⟶	Least Important
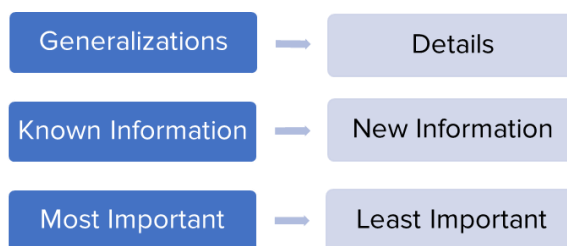
Building Credibility: Remember, credibility is all about the audience's perception!

Expertise: Speak at their level, but don't oversimplify. Share details relevant to the presentation and audience.

Trustworthiness: Discuss multiple sides of an issue. This shows your audience that you are knowledgeable and are not just pushing a specific agenda.
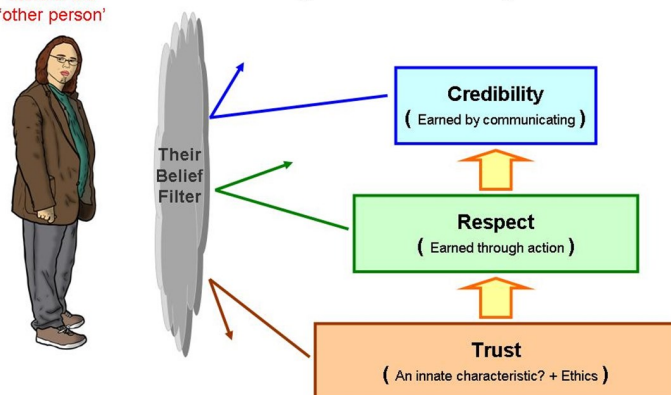
Group Membership: Mention relevant groups that the audience might relate to, i.e. the Ohio Farm Bureau.

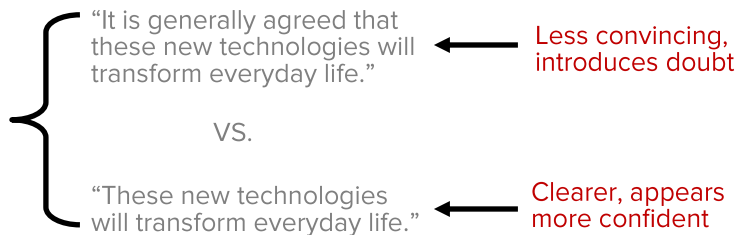**Dynamic Appeal**: Be passionate! Share your message with confidence and show enthusiasm.

Authority: Mention you are in a position of power (Dean, President, etc.) or that you consulted with a person of power.

Building Credibility

It is all in the mind of the 'other person'

Their Belief Filter

Credibility (Earned by communicating)

Respect (Earned through action)

Trust (An innate characteristic? + Ethics)

Hedging - qualifying a statement with conditions or exceptions

"It is generally agreed that these new technologies will transform everyday life." ← Less convincing, introduces doubt

VS.

"These new technologies will transform everyday life." ← Clearer, appears more confident

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Example Impact Statement

Global warming is one of the largest issues of our time, having major impacts on agriculture, plant and animal diversity, and weather patterns. Greenhouse gases contribute to global warming by trapping heat in the atmosphere. Methane, which is 25 times more harmful than carbon dioxide, is one of the largest contributors to global warming. Livestock produce approximately 14.5% of the methane released into the atmosphere, half of which is created by cows alone.

In one day, a cow produces an average of 200 liters of methane. One CFAES researcher is using additives in cow feed to reduce the amounts of methane cows produce. A white powder, 3-nitrooxypropanol, is added to feed at various levels and methane production is measured. So far, the additive has been shown to cut methane production by up to 20%, depending on the amount they're given.

Not only does this method decrease the amount of methane released, but it increases the efficiency of the feed, since 4-12% of cattle feed is wasted through the methane gas. This may have potential to lead the cattle to grow faster or produce more milk.

Though these methods have not yet been economically evaluated, it is expected that dietary manipulation will be an inexpensive solution for farmers to adopt. If this method is adopted on a large scale, methane produced from livestock operations could be reduced overall, in turn decreasing the contribution to total methane in the atmosphere.

Due to the fact that methane has a global warming potential 25 times greater than carbon dioxide, reducing methane emissions would have a greater effect than reducing the same amount of carbon dioxide emissions. Being able to supplement cow feed with a simple additive could have significant effects at reducing global warming.

Background: What issues were the researchers trying to address? Who cares about the issue? Why do they care?

Methods: What did the researchers do to address the issue? Were innovative methods or tools used? Keep this relevant and don't dwell on the details.
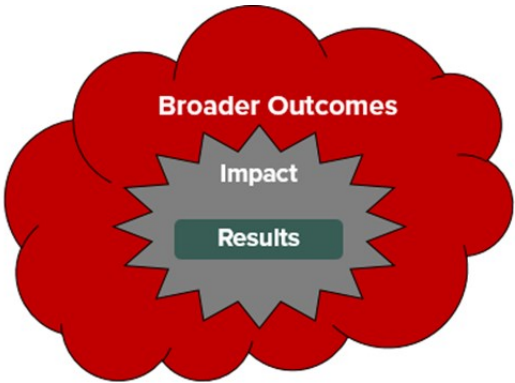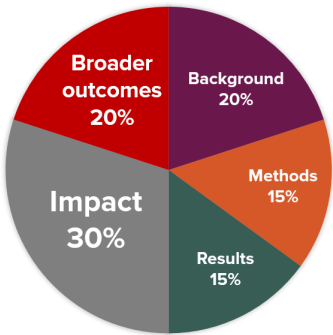
Who was involved? Mention stakeholders

Results: What were the major results? Keep this brief and to the point.

Impact: What kind of impact did this project have? This is a change in condition, knowledge, or behavior—don't be afraid to talk about potential or expected impact.

Who was impacted and where did it occur? Mention stakeholders and relevant geographic areas.

Broader Outcomes: Were there societally relevant impacts?

IMPACT STATEMENT

Broader outcomes 20%
Background 20%
Methods 15%
Results 15%
Impact 30%

Broader Outcomes
Impact
Results

Outputs/ Results	Impact	Broader Outcomes
Measured results	Change in Knowledge, Action or Condition	Societally relevant outcomes, economic impact
Immediate	Short-term	Long-term
"the additive has been shown to cut methane production by up to 20%"	"This may have potential to lead the cattle to grow faster or produce more milk." (change in condition)	"Being able to supplement cow feed with a simple additive could have significant effects at reducing global warming."