The Communication of Science: an integral component of the undergraduate experience

Dr. Adam Oliver Brown
Communication and Academia

- Intra-specific communication
- Inter-specific communication
- Pedagogy
- Communication to the Public
Communication to the Public

- Justify your funding
- Impact public policymaking
- Increase public understanding of issues
- Create informed citizens
Science Communication Failures
Special Interest Groups

I have been informed from a reliable source that this "Global Warming" is just nothing but junk science!
Real Life Preparation for Undergraduates

- Most students move on from academia
- Become our “Science Ambassadors” to non-specialists
- Require skills in the public communication of science
Department of Biology at uOttawa

  - Promote service to the community

- Outlined Strategic Goals (2011 – 2016)
  - Increase participatory learning
  - Improve communication skills
Communication and Academia

- Intra-specific communication
- Inter-specific communication
- Pedagogy
- Communication to the Public
Public Communication

- Academia is
  - General > Specific

- Public communication
  - Specific > General

- Scientific format works well for scientists but…

- Bottom line
Framing for a Diversity of Audiences
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Talking to the Press

- Clear, Concise, Conversational (3Cs)

- Need a catchphrase headline

- Anticipate your contrarian

- Personalize it, but distinguish your roles
Talking to Policymakers

- Extremely busy people
  - Talk to aides
  - Recognize different schedules

- What do we do about it?

- Good at balancing interests

- Quick, catchy take-home messages about importance

- People, Press, Policy, Principle, Politics (5Ps)

Joe Fontana
Mayor of London
Exams as Communication

- Students view them as ‘Point Scoring’
- We evaluate their ability to convey material
- Must be able to explain content to uninitiated
BIO4101/4501: Pesticides and the Environment

- Presentations as ‘Scientists’ to different audiences
  - Town Hall Meeting
  - Business Group
  - Government Agency
  - High School Auditorium
Etymological Approach to Learning Biology

- Specialized topics bring their own lexicon
- New terminology a challenge to learn
- Scientific terms mostly Greco-Roman
- English is a hybridized language
  - Anglo-saxon, Celtic, Nordic, Norman, French...
Transition to Dry Land

Actinopterygii

Sarcopterygii
Système reproducteur

Ovarioles
Oviducte latéral
Oviducte commun
Vagin
Spermathèque
Glande accessoire
Oothèque
The learning, retention and communication of the Sciences

- What we don’t teach in the classroom
- In English and French
Get an Early Start to Communicating