**UM BRIDGES Science Communication Competencies and Assessment**

Science communication is the communication of science-related topics to non-experts; either non-scientists or those from other fields.

Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Communicator Name(s):\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Communication Format (e.g., oral presentation, lightning talk, blog, written document, poster presentation, etc.)

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v180928 *Adapted from:*

National Communication Association. 2007. The Competent Speaker Speech Evaluation Form, Second Addition. Edited by S. Morrealle, M. Moore, D. Surges-Tatum, and L. Webster.

Murdock, R. 2017. Assessing Public Presentations by Scientists. From Graduate Dissertation “An instrument for assessing the public communication of scientists. Iowa State University.

*Not all components of each competency are relevant to all communication formats.*

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| **Communication Competency** | **Beginning (1)*****Provide Examples and Notes*** | **Developing (2)*****Provide Examples and Notes*** | **Strong (3)*****Provide Examples and Notes*** |
| 1. Effectively Introduce Topic* Attention Getter: “hook” to grab audience’s attention
* Establish Credibility: personal connection to topic plus authoritative credibility as expert, professional
* Orientation to Topic: clear topic, clear thesis, preview of main points
 | Irrelevant opening or abrupt jump into topic; little attempt to build credibility or unprofessional;thesis and main points difficult to deduce and not explicitly stated | Mundane hook; somewhatdevelops credibility; awkwardly composed thesis, provides littledirection for audience or main points must be deduced | Excellent hook; firmly establishedcredibility and professionalism; sound orientation to topic, clear thesis, preview of main points cogent and memorable |
| 2. Clearly Communicate Topic* Clear and Precise: use of understandable language, clear and identifiable purpose, makes the complex clear, concrete examples
* Organization: structure appropriate for audience, logical and easy to follow progression for format
* Language & Terminology: appropriate to audience, avoid jargon
* Key Points: structure focuses on, and drives home 3-5 key points
 | Thesis/ purpose is not clear or too complex; structure is hard to follow; too much use of disciplinary jargon or technical terms; key points difficult to discern or remember | Thesis/ purpose must be deduced; structure acceptable; mostly avoid jargon but technical terms not explained or used more than necessary; key points can be discerned or are not memorable | Immediately clear and identifiable thesis/purpose even if complex topic; excellent introduction/ conclusion and logical progression between ideas as appropriate for format; terminology clear to all audience members; key points are clear and memorable |
| **Communication Competency** | **Beginning (1)*****Provide Examples and Notes*** | **Developing (2)*****Provide Examples and Notes*** | **Strong (3)*****Provide Examples and Notes*** |
| 3. Communicate Relevance & Importance* Relevant: target message to audience’s concerns and connects to their lives and interests
* Important: compelling case for interest or action
* Metaphors & analogies: used to simplify and build on common goals, values, or experiences
* So What: clearly stated and memorable
 | Only brief mention of topic’s importance or disconnected from audience’s concerns; does not draw on audience’s life-experience or knowledge base; no call to action or reason to care; audience cannot clearly state the “So What” | Adequately compelling and relevant to audience; builds some common ground; call to action can be discerned; some audience members may understand the “So What” | Compelling case for relevance and importance of the science topic to audience’s lives; creates common ground; effective call to action; audience leaves very clear on the “So What” |
| 4. Technically Correct Science Supported by Evidence* Science Process: explained clearly at level appropriate to audience and format
* Technically Correct: science is solid and assumptions, uncertainties, and limitations explained; social values are presented as such
* Evidence: data and literature synthetized to provide and articulate evidence appropriate to topic, problem or recommendations
 | Scientific process not mentioned or insufficient or too complex for audience; communication veers toward opinion or limitations and uncertainties left unsaid; social values are presented as scientific values (e.g., dam building is “bad”); little to no evidence provided to justify findings, solutions, or recommendations, or data presented without articulating how this provides evidence | Scientific process mentioned but somewhat unclear; audience has some evidence or guidance to understand what is known versus unknown and what are limitations or research and findings; data or details presented without being fully linked to how this provides evidence | Explains multiple scientific processes at level appropriate to audience; science is technically correct and the complex made simple; audience understands key results/knowns, research limitations, and remaining uncertainties; context and acknowledgement of any applied social values provided; information synthesized to provide strong evidence behind findings, solutions, or recommendations  |
| 5. Engage and Appreciate the Audience* Engaging Material: high quality and understandable visuals, graphs, etc. to engage the audience, build credibility, and simplify complexity
* Appreciates Participation: conveys appreciate for stakeholder’s perspectives and allows appropriate opportunities for input or dialogue
 | Low quality or confusing supporting materials; does not convey appreciation for the stakeholder’s perspective, no opportunities for dialogue or input, or strays toward non-professional dialogue | Sufficient quality and somewhat engaging supporting materials; professional level interaction with audience and reasonable opportunities for dialogue or input | Excellent quality supporting materials that engage and draw in the audience; expresses or conveys appreciate for and understanding of stakeholder concerns; audience leaves satisfied with the exchange |