



Practicing Recommendation #5

Use the 4Bs To Tell Science-Rich Stories

An Example:

The 4Bs	The 4Bs in Narrative Form
B1 Background	Farmers can't sell food that has been damaged by insects or diseases. To stay in business, farmers must make decisions that keep these problems from harming their crops.
B2 Biology (A Technical Fix)	Many farmers use special traps that help them monitor insect lifecycles and migration patterns. By knowing exactly what insects are around, and when their feeding patterns are about to spike, farmers can select the right treatment and apply it at the just the right time. A precise approach to crop protection is more effective, and minimizes environmental problems and risks related to treatments.
B3 Barriers	But monitoring and targeted control takes time and money that farmers are generally not compensated for when they sell their crops. This means that even when they want to adopt practices like monitoring insects with traps, they are not able to take the business risk.
B4 Balance	We need to change our market design and farming policies to make it easier for more farmers to use resource-intensive, precise approaches to managing insects and diseases because approaches like these are effective and prioritize human health and environmental protection. We also need to recognize that problem solving in farming is context-dependent – farmers will apply different solutions to different crops in different climates, soil types, and locations. By supporting farmers' investments in context-appropriate, resource-intensive approaches to warding off insects and crop diseases, we can build a more stable farming system that is good for business, good for people, and good for the planet.

Your Turn:

Use the 4Bs planning table below to build out stories that tap into the deep American love of ingenuity, help people recognize farming as an applied science, and build public support for policies that enable farmers to engage in scientific innovation.

Feel free to fill out the table with phrases and words (rather than full sentences), and to **do so in any order**. Later, you can write out your story in sentence form on a separate paper.

4Bs Planning Table:

The 4Bs	The 4Bs in Prompt Form
B1 Background	<u>Prompt:</u> Set the scene for science by offering essential background information about the on-farm challenge addressed by your biological intervention/technological fix (B2). For example, you can talk about context-specific farming conditions – e.g., climate, soil type, crops, etc.. – and/or other key facts related to the challenge on-farm challenge.
B2 Biology (Technological Fix)	<u>Prompt:</u> Describe an innovative, biological intervention/technological fix that farmers can use to meet the on-farm challenge described above (B1). This is your opportunity to provide a vision of what the future of farming could look like.
B3 Barriers	<u>Prompt:</u> Widen the field of view to show barriers to adoption and/or trade-offs – e.g., financial costs, environmental impacts, human health, etc. – that influence a farmer’s decision to use or not use the technological fix described above (B2). Try opening this part of your story with a contrastive — a word like but, however, or unfortunately.
B4 Balance	<u>Prompt:</u> Bring it all together. Propose a balanced, systems-level solution that would help farmers overcome barriers (B3) to adopting the innovative biological intervention described above (B2). What can the public do to support this systems-level change? How does solving the on-farm challenge (B1) connect to off-farm concerns and/or thriving communities? Try opening this part of your story with your answer to this last question.