**Guidelines for developing good seminar discussion questions (BIOL 411, Winter 2023)**

Developing good questions is a fundamental critical-thinking skill. The best seminars and lectures are often focussed on addressing a clearly articulated, high quality, thematic question. Likewise, good writing is often based around synthesising your thoughts into a clear, focussed question that then becomes the basis for the argument or thesis statement or specific research questions or hypotheses. Thus, being able to develop good questions is a fundamental component of learning how to ‘think like a scientist’, but more widely, it is an important life skill for any citizen. And in this course, one of the goals is not just to help you ‘think like a scientist’, but also to think about the larger context in which that science is placed.

Seminar questions should be constructed so that they will likely lead to focussed, intelligent discussion that will move the seminar group toward some potential answer, or toward a more refined perspective on the issue/theme, or toward an even more refined question.

Study the assigned reading material carefully, and reflect on it. What really interests you about it, and why? Develop questions that would take you (and your audience) *beyond* the reading’s text. In other words, formulate a question, and then develop an answer... and use the ideas that arise in that initial answering process to further develop your original question so that is more refined, and probing, and therefore likely to lead to an interesting focussed discussion. This iterative cycle can be repeated multiple times. Good questions have the following features:

* Challenging – they contain ideas that are new and indicate an advance on what is stated in the text
* Original – they indicate clear deep thinking by the questioner, often including his/her own specific ideas
* Focussed/specific – they contain enough detail that they will narrow the discussion and constrain it from vague generalisations
* Rarely can be simply answered as Yes or No, without adding some explanation. For example, don’t ask the reader what ‘he/she thinks’ (e.g. Do you think.....?) - instead put in your own thoughts and then pose the question as an assertion (E.g. If.... , then why/what/how....).
* Concise – Keep your text as focussed as possible... text length is NOT correlated with question quality. Recommendation: If your question absolutely needs some introductory text (and it may not!!), keep it to **no more than 2-3 sentences at most, followed by just one single question.**
* Questions that begin with ‘Why?’, and sometimes with ‘How?’ are often particularly engaging, focussed, and effective in developing a good discussion.