What makes teaching physics effective for life science students?

Catherine Crouch and Ben Geller
in collaboration with:

- Curriculum developers and PER researchers at Maryland, Minnesota, and elsewhere
- Biology and Chemistry faculty
- Ann Renninger (Education)
Calls for Reform: IPLS
Physics 3L/4L at Swarthmore

- Catherine has collected data on several iterations of 4L, and we are collecting more this semester as I teach 4L (including student interviews done by a collaborator at UMD).

- 3L will go live next fall for the first time!
Research questions

- How do life science examples aid students in learning physics?
- What role does interest and affect play in interdisciplinary learning?
- Do students use physics in their upper division bio and chem coursework and in their research?
- How do life science students view modeling and simplification?
Methodology

- The best PER research combines **quantitative** (statistical) analysis of pre/post survey questions with more **qualitative** analysis (interviews, ethnographic classroom observation, open-ended survey questions).

- There is an opportunity to gain skills that are relevant to both teaching and research.
To learn more ....

If interested, please get in touch with Ben Geller to discuss this further: bgeller1@swarthmore.edu

And, if you ever want to chat about teaching physics or science education more generally, feel free to stop by SC L40!