## MBBM - Creating Case Based Curriculum at the Intersection of Biology and Mathematics

This is the first of two planned workshops Delaware will host the 2010 one next summer

History - Builds on two prior HHMI sponsored meetings (ETSU 2007 and HHMI 2008) See http://wikifuse.pbworks.com/Symposia

Goals -
1 Bring together teams of biologists and mathematicians to develop case based and PBL-like exercises for education in biology, mathematics, computer sciences and quantitative biology.
2 Adopt and adapt and create materials to help students see the connections between mathematics and biology.
3 Discuss ways to attract students to the area of mathematical or quantitative biology.

Format - 3 1/2 day workshop
Participants - Approximately 24 attendees, organized into groups of 4 . Each team will contain two biologists, two mathematicians, and representatives from at least two different institutions.

Sponsors - Emory, University of Delaware, HHMI, BioQUEST Curriculum Consortium
Two Project Model - Adopt \& Adapt, New Project Participants will both see materials that exist and create new materials for their needs.

Special Features - Meeting will include talks by researchers working at the intersection of mathematics and biology.

Schedule Introductions Who we participants are and what we hope to accomplish
Monday 7/20 Arrival, check-in and reception 5:30-7:30 pm Keynote: From 2010 to 2020 Future of MathBio John Jungck

Tues 7/21 What's out there, learning about cases and linking math and bio, adapt and adopt John Pelesko and Pat Marsteller

8:30-9 am Continental Breakfast
9:30-12:30 Try it out: Do a case and use a math tool (TBA) to investigate that case (case and tool given) Invasive Species Case
12-1:30 Lunch

| 1:30-2:30 | Talk: John Pelesko Math-Bio |
| :---: | :---: |
| 2:30-5 | Adapt and Adopt: What do you need to know about students, what are your goals and learning outcomes, then choose from datasets and tools provided to adapt the invasive species case to your own course and locale |
|  | Work time and technical assistance as needed |
| 5:00-6:30 | Reception and posters to share of what doing at own institution in Quantitative Biology Math Bio or BioMath Initiatives |
| Wed 7/22 Reporting on early work, group formation, project definition, |  |
| 8:30-9 am | Continental Breakfast |
| 9:00-10:30 | Small presentations on first project |
| 10-12:30 | Sources of Cases Discussion: Implementation issues Discussion of areas of bio and math to find cases to adopt/adapt |
| 12:30-1:30 | Lunch |
| 1:30-2:30 | Chad Topaz Topic TBA http://works.bepress.com/chad topaz/ |
| 2:30-5 | Finding Cases for your course Work time and technical assistance as needed |
| Dinner on your own |  |
| Thur 7/23 Writing new cases, planning for assessment |  |
| 8:30-9 am 9:00-12:30 |  |
| 12:30-1:30 1:30-2:00 2:00-5:30 |  |
| 4:30 Dinner on your own |  |
|  | 8:30-9 am 9:00-10:00 10:00-12:00 12-1:30 |
| Fri 7/18 |  |
|  | Continental Breakfast Writing New Cases, Creating New |

Problem Marsteller, Margaret Waterman, Sam Donovan Lunch
Spaces Lunch Lunch Discussion: assessment issues Groups work on new cases and tools; case clinics at 3 and Work time and technical assistance as needed
Pat

Reporting on second project, planning for implementation planning for ongoing communication

Continental Breakfast Prepare presentations on new project ideas Present new project Lunch Wrap up and closure

