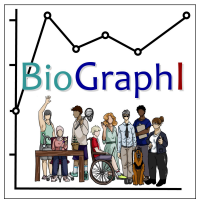

Biologists and Graph Interpretation Network

Prompts for BioGraphI Faculty Mentoring Network (FMN) Forum Posts

By Suann Yang, Merrie Richardson, and Rachel Pigg

Instructions

1. **Organization.** In the QUBES group for the current FMN, organize forum post by week of FMN and label with a due date (one to two days before the next meeting).
    a. Section Name: General
        i. Category name: Introductions
    b. Post-meeting assignments
        i. Category name: One for each week (Post-meeting assignment due on Month Day, noon)
        ii. Category description: Include date assigned and a brief sentence about what the assignment is about. (e.g., Assigned on June 11. When you'll implement your BioGraphI module in a class and how you'll frame the assignment for your students.)
2. **Post format.** Set up the prompt as the first post, making it sticky and a closed thread. Instruct FMN participants to set up their own (new) posts within each discussion folder, so that each participant's post can have its own thread.
    a. Title format: Post-meeting assignment due on Month Day: brief summary of task (e.g., Post-meeting assignment due on Sept 13: when you'll implement your BioGraphI module in a class and how you'll frame the assignment for your students)
3. **Timelines**. Publish each forum post immediately after the week's FMN meeting, so participants have the full period to work on their homework prior to the next meeting. (e.g., Week 1 Kickoff meeting homework is due Week 2)

Prior to Kickoff Meeting

Getting Started Q&A

Category name: Getting Started Q&A
Category description: None

Post title: Got questions about the BioGraphI FMN? Ask them here.

Post text:
During our kickoff meeting, we will share an overview of our FMN, discuss logistics, briefly tour the QUBES Hub website, and explain the BioGraphI modules (see first announcement for details). If you have questions before our kickoff meeting, please ask them here by clicking +New Discussion.

Introduction forum post (preparatory work)

Category name: Introductions
Category description: None

Post title: Introductions

Post text:
Welcome to the BioGraphI FMN!

Let's take a moment to introduce ourselves and share our prior experiences and goals with fostering data literacy and diverse perspectives in the classroom. To help you focus your thoughts on these topics, we've designed a short self assessment for you to complete. To access this assessment, first register for the LimeSurvey survey with this link [INSERT LINK]. Please make sure you fill out this survey before you introduce yourself.

In addition to information about yourself, please reflect on your responses to the survey and share with us:

- Some examples of what you are already doing to foster data literacy skills and/or increase student awareness of diverse perspectives in biology
- Your goals with respect to fostering data literacy skills and increasing student awareness of diverse perspectives in biology

Please click +New Discussion for your response, and keep each person's discussion threads separate (i.e., reply to someone's post to add to their discussion, but start a new discussion thread to introduce yourself).

Week 1: Kickoff Meeting

Syllabus review and statement forum post

Category name: 1 - Due [DATE, TIME]
Category description: Assigned on [DATE]. When you'll implement your BioGraphI module in a class and how you'll frame the assignment for your students

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Post title: Post-meeting assignment due on XX: When you'll implement your BioGraphI module in a class and how you'll frame the assignment for your students

Post text:
Time to plan when you'll implement your BioGraphI module in a class, and frame the assignment for your students. To help you get started, first review From Planning to Publishing [INSERT LINK] on our QUBES site.
Click on +New Discussion to create your own discussion thread, and please share with us:

- The course you will implement your module in, when you intend to schedule it in your syllabus, ideas for the scientific topic(s) that will be covered, and other details about your course, such as modality, class size, student level, the types of activities that you already use in the course, etc.)
- Your thoughts on who your students would like to hear from in your BioGraphI module. In other words, which identities would have relatable perspectives for the students in your course this semester? Remember to consider intersectionality as well. If you aren't sure, we invite you to share your ideas on how to find this out from your students.
- A draft of a message for your syllabus that communicates to your students your values with regard to diversity and inclusion in biology, and how those values tie in to your (planned) BioGraphI module activities. You may find this resource useful in preparing your message: Rethinking the Course Syllabus: Considerations for Promoting Equity, Diversity, and Inclusion. It's ok if your syllabus is already written for the semester or quarter - you can use it next time around, and use the language when assigning your BioGraphI module this term.

We'll discuss our implementation plans and our syllabus message drafts at our next meeting. In addition to these topics, we'll also revisit the Community Guidelines for our FMN, so please take a few moments to review the existing guidelines to discuss them at our next meeting.

Week 2

Start on Lesson Guide forum post

Category name: 2 - Due [DATE, TIME]
Category description: Assigned on [DATE]. Start filling out the BioGraphI lesson template, beginning with learning objectives.

Post title: Post-meeting assignment due on XX: Start filling out the BioGraphI lesson template, beginning with learning objectives

Post text:
We will begin the development of your BioGraphI lesson by reflecting on what you want your students to learn from your BioGraphI module. To help you get started with designing your lesson

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plan, first compare the example BioGraphI lesson plan from the Make Your Move module to the lesson plan template you will fill out as you make your own BioGraphI module this term:

- an example BioGraphI lesson plan (Make Your Move module)
- the BioGraphI lesson plan template you will fill out as you make your module

Next, review the following resources, to review Backwards Design Principles (from learning objective development to assessment development to in-class activity development):

- Withers College Science Learning Cycle paper
- collection of Backwards Design Resources
- The BioGraphI student assessment instrument
- example Assessment Tools (quantitative skills, concept inventories)

For your homework this week, start working on filling out the BioGraphI lesson plan template. Make an editable copy of the BioGraphI lesson template, and:

- Draft your content learning objectives for your specific lesson
- (Optional) Add quantitative or DEI learning objectives to the existing LOs in the template already
- Identify assessment tools/strategies for your content LOs
- Decide if you would like to use the BioGraphI Student Assessment Instrument to measure your students' quantitative and DEI outcomes
- (Optional) Complete as much of the rest of the BioGraphI lesson plan template as reasonably possible

In your forum post, click on +New Discussion to create your own discussion thread, and please share with us your thoughts on one or more these questions:

- How difficult was it to write your content learning objectives using measurable language (e.g., "explain" rather than "understand")?
- Do you feel satisfied with the way your assessment tools measure student achievement as defined in the learning objectives? Are there any assessment content elements that are not covered in the learning objectives?
- Are there any elements of your lesson plan on which you would like additional review and feedback from the group?
- What questions do you have?

Remember to share your lesson plan here by (1) storing a copy in our FMN's Google Drive [INSERT LINK] and (2) posting a shareable link of your BioGraphI lesson guide here. (We recommend maintaining a backup or your original file in your own file storage system as well).

Next week, we will debrief on your lesson plan progress and begin matching peer review partners based on lesson content.

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Week 3

Potential interviewees

Category name: 3 - Due [DATE, TIME]
Category description: Assigned on [DATE]. Who are your potential interviewees for your BioGraphI lesson, and why?

Post title: Post-meeting assignment due on XX: Who are your potential interviewees for your BioGraphI lesson, and why?

Post text:
To prepare for our next meeting, review our guidelines for interviews and guidelines for selecting a potential interviewee, which includes a link to a mega-database of diverse scientists**.** We have also previously recruited potential interviewees, and those who are available this semester are summarized in this spreadsheet [INSERT LINK].

Start a New Discussion and share with us:

- who you are interested in inviting to collaborate with you, and why.
- any questions you have for the group or describe any other support you are seeking from us with regard to potential interviewees.

If you're ready to invite your potential interviewee, please use our template letter for inviting your interviewee to collaborate with you on your lesson. Here is the list of interviewee questions if you are ready to pass them on to your interviewee.

We'll discuss your shortlist of potential interviewees, ideas for narrowing down your list further, and your emerging questions in our next meeting.

Week 4

Peer review of lesson plans using the UDL principles

Category name: 4 - Due [DATE, TIME]
Category description: Peer review of lesson plans and interviewee selection update

Post title: Post-meeting assignment due on XX: Peer review of lesson plans and interviewee selection update

Post text:

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This week's post-meeting assignment has two parts: (1) a peer review of your partner's lesson guide & (2) an update on your progress contacting the interviewee for your lesson.

Part 1: Peer Review –

First, here's a reminder of which colleague(s) you were partnered with for peer review:

Cohort 1:

-

Cohort 2:

-

Cohort 3:

-

To complete this peer review, go to the Week 2 discussion forum [INSERT LINK] and respond to your colleague's lesson guide post in that forum (using the "Add Post" box). You only need to provide a peer review of the lesson guide of the colleague you've been matched to. In your posted response to that colleague, you can provide feedback on any documents linked in your colleague's post in this forum. Use these guiding questions when providing feedback:

- Does the lesson guide that you just read and reviewed follow the framework for Universal Design for Learning?
- Using the three major UDL Principles established by CAST, describe how the lesson guide aligns to the goals of this framework. If additional work is needed to meet the UDL principles, outline the tasks that could be done.
- What other suggestions for incorporating UDL do you have for your partner?
- What questions do you have for your partner?
- Please also address any items your partner asked you to focus on.

Here are some UDL resources to help you with reviewing:

- Universal Design for Learning guidelines (CAST)
- UDL Collection on QUBES
- Multiple Modes of Representation Collection on QUBES

If the colleague you've been partnered with for peer review hasn't posted a link to their lesson guide yet in the Week 2 discussion forum (or the link provided doesn't work for you), you can request that link in a post-response or a new discussion. Once the document is posted by your partner, you can return to complete this part of your post-meeting assignment.

We'll discuss the peer reviews of our lesson plans at our next meeting!

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Part 2: Update progress on interviewee search –

Here, in this Week 4 discussion forum [INSERT LINK], start a New Discussion and update us on your progress with contacting your interviewee and scheduling a meeting with them to discuss your lesson. Remember to use our template letter for inviting your interviewee to collaborate with you on your lesson. Here is the list of interviewee questions you can share with them, if they accept your invitation.

As always, please reach out if you need help from the group. We'll share and discuss your progress together at the following session's debrief.

Week 5

Revision of lesson with UDL in mind forum post

Category name: 5 - Due [DATE, TIME]
Category description: Assigned on [DATE]. Revision of lesson (with UDL in mind).

Post title: Post-meeting assignment due on XX: Revision of lesson (with UDL in mind)

Post text:
This post-meeting assignment has two parts.

First, share 1) your revised lesson guide and 2) a draft of your lesson materials. Store copies of your updates and lesson materials in our FMN's Google Drive [INSERT LINK] . Post a link to the draft of your Google slides, and give us the link to your revised lesson plan so we can refer to it easily. Wherever you are at in your process, we encourage you to post your current version of your lesson (Google slides, lesson guide, etc.). Even sharing what seems like a small amount of progress to you can be useful and even inspirational to someone else!

Second, please briefly describe how your materials incorporate UDL principles. Are you now more confident in your ability to support diverse students? What challenges do you anticipate you might encounter with applying UDL principles, and how might you address them? What feedback on UDL are you seeking on your revised lesson plan?

Here are some resources to help you with this task:

- UDL framework
- UDL implementation rubric
- UDL Collection on QUBES
- Multiple Modes of Representation Collection on QUBES
- Feel free to take a closer look at our example modules as you develop your lesson further

We'll discuss the revisions we've made on our lessons at our next meeting.

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Week 7

Refine lesson materials

Category name: 7 - Due [DATE, TIME]
Category description: Assigned on [DATE]. Keep working on your module.

Post title: Post-meeting assignment due on XX: Keep working on your module

Post text:
We're getting there! Keep working on your lesson materials, interview, etc.

Before our next meeting, use the +New Discussion button and update us on your work. In your post:

1. Describe how things are going as you continue refining your lesson materials.
2. Include a link to your updated materials to share your progress with the group.
3. Let us know where you are in the process of working with your interviewee. Please share with us any helpful tips and tricks that worked for you, or ask any questions.

During our next meeting, we'll also revisit our syllabus messages that we posted as Week 1 homework to identify areas of improvement, followed by incorporating diversity, equity, inclusion, and belonging (DEIB) in teaching philosophy statements and beyond. To prepare for these discussions, please take five to ten minutes to complete the Passion, Awareness, Skills, and Knowledge Inventory (PASK) (just the survey) prior to our next meeting.

Week 9

Warning: This week you'll create 2 different forum post assignments, both due by Week 11:

Lesson updates (Part 1)

Category name: 9 - Due [DATE, TIME] (1 of 2)
Category description: Assigned on [DATE]. Lesson updates.

Post title: Post-meeting assignment due on XX: Lesson updates (Part 1 of 2)

Post text:
In this forum, use the +New Discussion button to share another update on your lesson progress, when you are ready! Include any questions, comments, discoveries, updates on lesson construction, interviewing, and/or implementation that you encounter.

Revisit and revise syllabus statement (Part 2)

Category name: 9 - Due [DATE, TIME] (2 of 2)
Category description: Assigned on [DATE]. DEI statement/syllabus revision.

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Post title: Post-meeting assignment due on XX: DEI statement/syllabus revision (Part 2 of 2)

Post text:
At the beginning of our FMN, you wrote a message for your syllabus that communicates to your students your values with regard to diversity and inclusion in biology, and how those values tie in to your BioGraphI lesson activities. In this week's forum post, use the +New Discussion button to share your thoughts on the following:

First, reflect on what you have learned so far in our FMN, as well as these additional resources:

- Harvard self-assessment tool
- University of Kansas - Creating an Inclusive Syllabus tool
- University of Utah Inclusive Syllabus Review
- Emory University collection of DEI rubrics for DEI statements
- Fuentes et al "Rethinking the course syllabus"

Next, make any necessary revisions to your syllabus message for the next time you teach this course, and share it here. If you made any changes, please describe them and your reasons for making them.

Finally, take a step back and evaluate your entire syllabus for how you are communicating your values with regard to diversity and inclusion. In what ways are you already communicating these values? What revisions might you make to communicate your values more clearly?

Week 11

Final reflection forum post

Category name: 11 - Due [DATE, TIME]
Category description: Assigned on [DATE]. Prepare for show and tell, reflect on your growth and next steps

Post title: Post-meeting assignment due on XX: prepare for show and tell, reflect on your growth and next steps

Post text:
To prepare for our last meeting together on [DATE], please create slides to share your work in this Google Slides presentation [INSERT LINK]. Slide 2 of the presentation contains the instructions for how to do this.

Next, we'll ask you to complete a survey to reassess your experiences and perspectives on data literacy and diversity in biology (as an educator and in the discipline), now that you have nearly completed our FMN. Use this link to register for the survey [INSERT LINK].

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Next, review your introductory forum post where you shared with us your goals with respect to fostering data literacy skills and increasing student awareness of diverse perspectives in biology, and use the +New Discussion button to share a reflection on your growth over our time together:

1. How far do you think you have come with respect to your goals?
2. What will your next steps be?

Thanks for your contributions to the BioGraphI FMN community!

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