Quadratic Growth

As usual, please find your name on the list of today's studio groups, find your partner(s), seat yourselves comfortably, and read through the rest of this document.

Today's Agenda

We'll start with a bit of review from Chapter 6, then spend a while thinking about questions (from our QMRI framework) before moving on to the Chapter 7 notebook. We'll also talk about factors we might care about in comparing models to each other. Please remember to use pair programming throughout the day, whenever applicable.

Passing a Function as a Parameter

Note key points about passing a function as a parameter:

What do you want to remember from the demo from the Chapter 6 notebook?

Questions

We've been talking a lot about population models. On your own, spend five minutes generating questions you might ask that a population model could answer. Use sticky notes - one note per question. Generate as many as you can in five minutes, keeping in mind the pitfalls.

Now work with your partner for today. Pool all the questions you both generated; now choose three to work with. Don't spend a lot of time choosing, just pick three that are appealing. What are the outputs you would need from your model to answer each question? What metrics would you use?

What are the "bad question" pitfalls you want to avoid?

With your whole table, review the questions you've been discussing in pairs and critique them according to the pitfalls we presented.

What do you want to remember about this activity, including what you might hear from other teams around the room?

Next: Chapter 7 Notebook

What is the quadratic growth model?

What does "equilibrium" mean?

What are the four dysfunctions?

Model Comparison

What factors might you consider in comparing models?

Pick one or two of those criteria and evaluate the proportional and quadratic growth models.

Reflection Questions

1. Pick one question from the set of three questions you worked on with your group earlier and think about the model comparison you did on the previous page. Which model comparison criteria might be relevant in building a model to answer your question? Why?

2. Think about that same question (one of the three from your group). What modeling tools might help you answer that question?

Next Steps

Before class on Tuesday, please do the following things:

☐ Write your name here: _____

☐ Write your name(s) of your studio partner(s) here: _____

☐ By tonight: Scan this worksheet and submit it on Canvas.

☐ Also by tonight: Read Chapter 8 and complete the Chapter 8 reading quiz on Canvas. Run through the Chapter 8 notebook and do as much of the exercises as you can/want to. (We will also work through the exercises in class.)

☐ Meet in the studios on Tuesday.