***Refining Research Questions for Modeling***

**Wednesday, January 16, 2019: 11-30am-12:00pm AND 1:00-2:00pm**

**11:30-11:35am:** Divide the students into six groups of four/five. Have at least one instructor accompany each group and separate out into various corners of the facility.

* Groups: (1) Fidy + Sarah, (2) Andres + Ben, (3) Cara + Christian, (4) Amy

**11:35am-12:00pm AND 12:00pm-12:30pm:** Instructor should scribe and facilitate discussion, preferably on white board or large sheets of paper.

* **Spend ~15min on each group member, one-by-one. Give 3-5 min for the statistical question and 7-10 min for the dynamical.**
* Ask the student for his/her question statistical question and dynamical question and write at the top of the page for all to see. If the question can’t be modeled dynamically, guide the student to a complementary question that can.
* **For the statistical question, guide the student to define x and y, the model family, and the link function. Move on quickly from this model.**
* For the dynamical question, briefly brainstorm ‘populations’ and ‘states’ and ‘processes’ and ‘influences’ for the system represented by each question
* Guide the group into construction of a rough ‘model diagram’ that matches each research question and highlight possible states and processes within that system.

**1:30-2:00pm:** Regroup with whole group and close with discussion. Review ‘Make a Model Diagram’ HW