

**1:15-1:40pm: What is Science? Brainstorm of the scientific method (White Board Exercise)**

Goal: Have students understand the scientific method and pick a clear research question that can be modeled. The students do NOT need to precisely differentiate between the terms 'statistical' and 'mechanistic' here. That will come later.

People: Would be helpful to have one facilitator and one scribe.

**1:15-1:25: ASK: What is science?**

- Brainstorm ideas and scribe a list.
- Guide them to something akin to “the systematic observation of natural events and conditions in order to discover facts about them and to formulate laws and principles based on these facts”
  1. Need to get at the idea that science includes both (a) observation and (b) interpretation

**1:25-1:35: ASK: What is the scientific method?**

- Brainstorm with students the components of the scientific method, and reorder as needed if the order they offer differs from the “real” order
- Get them to a structure that broadly follows this:
  1. Formulating a research question
  2. Formulating hypotheses
  3. Collecting data
  4. Evaluating your hypotheses
  5. Refining your hypotheses

**1:35-1:40: ASK: Where does 'modeling' fit in?**

- Should fall in around hypotheses. Tanjona can explain in the following lecture how models are broader representations of data which can be used to test hypotheses
- Have the group pick a question that can be modeled. Guide them to a tractable question for our purposes. Given the primary audience at ATBC, it would likely be best if this question was more ecological than epidemiological.