Africa flow:

1. Ask everyone to take out ID card, then ask those with even last number to leave.
2. Write bit.ly/africa_quiz on board. After 1 min, erase link so next group doesn't see it
3. After everyone done quiz, switch groups
4. Write bit.ly/africa_experiment on board. After 1 min, erase link
5. After everyone done quiz, bring back other group
6. Show both questionnaires side-by-side. Ask what is different?
7. "Example of question in causal inference? Does X cause Y?"
   a. X = "priming" with numbers 14 & 94
   b. Y = differences in responses of countries guesses
8. Question: Are the differences in responses meaningful AKA significant?
9. Answer:
   a. Eye-ball test: Show boxplot I sent over Slack
   b. Statistical test: Later, we'll use a two-sample test for difference in means

Chalk talk

1. Randomized experiments (being specific about both components) versus observational studies
2. Goal of randomized experimentsis to neutralize any differences in confounding variables. They should be nearly equivalent. In this case: "have you been to Africa before"
3. General term is "randomized experiment"
   a. Specific to internet companies: called A/B tests
   b. Specific to medicine/drug testing: called clinical trials
4. Clinical trials
   a. Treatment vs control group
   b. Control group gets placebo
   c. Blinded vs double-blinded
   d. Stopping criteria
5. Example of observational study:
   a. ModernDive 5.3.1 Sleeping with shoes on causes headaches? If you randomly assign who sleeps with shoes (rather than select study participants self-select), the confounding variable Z will be equivalent between treatment vs control group
6. Ethics: If research will be public facing
   a. IRB: Facebook runs wild
   b. Clinical trial

Where randomization comes into play in statistics

1. Random *assignment* for *causal* inference (today)
2. Random *sampling* for *statistical* inference (Friday)