

Leaf Box:

- Need different velocities for each component in the subsystem
 - This is for calculations
 - Sum of different parts
 - Velocities are the only problem with the calculations
- Do a control test over a hot plate
 - Helps understand full system
 - Too many variables initially makes measurements useless
 - this is good to address 1 part of the model to make sure it is correct, then redesign model and modular test to address another part of the model.
- Other team mates need to check over calculations
 - Once that is done, Stevens will check over
- Sensitivity analysis will change with velocity changes
 - Both heights are directly related so they will always have the same trend
 - Velocity will control temperature, not the other way around
- Chimney needs to be taller than one 2 liter bottle of coke
- Stevens' gut feeling is that it will be more effective to make the chimney higher than wider
- there may be a pressure drop across the leaf trays.
- Inlet pipe will be where most of the pressure drop is
 - Use square supports to bring the air in
- Support structure can be used for air intake

Water Pasteurization:

- The Matlab Q & U graphs should be discrete points, not lines
- Heat losses to surroundings are going to increase with hotter temperatures
- Heat gain is difference between fire and pipe
 - Use to model resistance from fire to pipe
 - Use to optimize and account for losses
- NEED to understand losses to the environment
- Don't use gas temperature, instead use fire temperature (it will most likely stay constant)
 - Use a formula to model for gas temperature
- We lost radiation part of our calculation by not taking temps straight from fire
- NEED to be able to know gas temperatures at different heights
- Idea is to predict Q at different heights
 - If we can predict T_{gas} , we can predict Q
- Need to calculate which part of total U is from the pipe
 - Doing this can prove that conduction U is trivial
- Minor head losses from bends are not important
- Consider the "knobs" and how we can make the system work
 - DESIGN IN THE KNOBS

Combined System:

- Should have schematic of where we made measurements

System Architecture:

- Remove the steam arrow