

ESRP 310 Fall 2007, 5th Lab, September 20, 2007

SLIC Room available 2 to 5 pm

Dr. Ford will arrive at 2:30 pm

Agenda: Practice with Causal Loop Diagrams

We will use the 5th lab to do some modeling. But mostly we will practice drawing causal loop diagrams. For this lab, I will ask that you **turn in a printed copy of your work** so I can check that you have completed the agenda.

Start with the Hikers' Model

Visit the "Let's Go for a Hike" exercises on the book's website and get started on exercise #1 (Build and Simulate the model of the four hikers walking up the hill). Make a printed copy of your model and the time graph requested. Be sure to answer the questions.

Previous students were unsure about how to implement the "pace adjustment" (~) for hikers 1, 2 and 3. I will be there by 2:30 pm in case you have questions on how the nonlinear graph for the pace adjustments should be written.

Causal Loop Diagram of the Hikers' Model

Now draw the causal loop diagram to see feedback loops in the model.
(This is Web exercise for Chapter 7, #7.)

Causal Loops in the Electric Blanket System

Web exercises for Chapter 7 #1: complete the diagram for the electric blanket
#2: expand the diagram for the electric blanket

Causal Loops in the Model of the Private College

Web exercise for Chapter 7 #5: draw the causal loop diagram to show the feedback loops in the model of the private college.

Beta versus VHS in the Video Recorder Market (chapter 7 #8 in the book)

Draw a causal loop diagram to reveal competitive market shares between two types of videocassette recorders (VCRs): VHS and Beta. Assume that a large market share of VHS leads video outlets to stock more prerecorded tapes in VHS format thereby increasing the attractiveness of VHS recorders. Of course, the same argument applies to VCRs with the Beta format. (Previous students said that this was one of the more difficult questions)

Time Permitting: get started on chapter 7 #9,10,11,12 which is due next week