Temperature regulation - 2013 revision

For each of these situations, answer questions 1-7 below.
A) Normal human body temperature is 37°C. Room temperature is more like 25°C. So unless it's **really** hot out, there is always a temperature difference between your body and its surroundings. What's going on?
B) You get too cold, and need to warm up. What happens?
C) You get too warm, and need to cool down. What happens?
D) Now answer parts A, B, and C for the ectothermic (i.e. what is popularly and inaccurately known as "cold-blooded") animal (e.g. reptile) of your choice!

1) What's happening? Explain what's going on qualitatively, and feel free to bring in outside knowledge.
2) What object or set of objects is the most useful for you to define as "the system"? (There are a large number of possible correct answers to this! But this is an important choice you must make.)
3) Draw a system schema for your system (which you can continue updating as you answer the rest of the questions).
4) During the process described, what is the change in the total energy of the system? (Positive, negative, or zero?)
5) Same question as 4, for the chemical energy in the system.
6) Same question as 4 for the thermal energy in the system.
7) Does any energy enter or leave the system? If so, by what process (heat, work, etc.)?