By now you should have installed the “Earth Systems Today” CD that came with your text. Click on the “Earth Systems Today” icon to start the software. Click on “Groundwater” on the lower row of icons. Click on the “Activities” tab. You should now have a screen that has an “Overview” of Groundwater.

First Read the Overview. Then on the right-hand side of the screen, click on “Groundwater Basics” (under Introduction). Look at all of the terms in the orange boxes and make sure you know what they mean; then click on the box in the lower right called “Show Terms” to turn off the boxes. Now play the animation by clicking on the forward arrow (note that by clicking on the little red box that moves to the right when the animation is playing, you can slide it back and forth to move forward and backward in the animation).

Answer the following questions:

1. Describe the relationship between the water level in the artesian well and the water level in the confined aquifer.

2. Describe the relationship between the water table (top of the water level in the unconfined aquifer) and the water in the River Bed.

Now click on “Activity Menu” on the blue tab to bring up the main menu; click on “Tapping the Ground”; You should see an animation called “Tapping the Ground: Cone of Depression”; move the red slider under “Pump Speed” up and down and watch what happens to the top of the water table.

3. Describe the relationship between pumping rate and the top of the water table.
Click on “Multiple Wells” and move the slider

4. Describe what happens to the shallow well when the deeper well is pumped too fast.

Click on “Permeability” and move the slider from Low to High.

5. Describe what happens to the water table when the permeability gets higher.

Click on “Activity Menu” and go to the section on “Potentiometric Surface”; read pages 1 and 2 and run the animation by moving the red slider up and down.

Click on “Activity Menu” and go to “Contamination”; read page 1 and run the animation.

Now go to the “Homework” tab and work through the questions. You don’t need to turn in the answers to the questions, but you should know the answers – you might see them on the second exam...