Daisyworld Model

Go to the link provided and follow these instructions to run a Daisyworld simulation. Think about the questions in preparation for Friday's quiz section. This should take ~10 minutes.

In a web browser, open http://zool33.uni-graz.at/schmickl/models/daisyworld.html, an interactive Daisyworld simulation. (Make sure when you paste the link that there is only one dash between 'uni' and 'graz'. Delete both and retype the '-' if needed.)

You'll notice this model is a little more complicated that what you read about in your textbook. There are both white and black daisies and you can change the values of a number of the parameters.

To simplify things, do the following.
1. set the 'solar-luminosity' bar to something approximately equal to 1.
2. set 'start-number-blacks' to 0
3. set 'seed-number-blacks' and 'seed-number-whites' to 0
4. turn 'scenario?' to 'off'
5. crank up 'scenario-incrementor' to the highest value
6. click 'setup'

Now, to run the simulation.
1. click 'go' and watch the temperature and number of daisies reach steady levels
2. click 'go' again to pause
3. go back up to the 'solar-luminosity' bar, and move it to something approximately equal to 1.1
4. click 'go' again (without hitting 'setup' first!)
5. click 'go' again to pause
6. increment 'solar-luminosity' by another 0.1 and continue the process as before
7. notice what happens to the temperature and number of daisies each time you increment luminosity

Now if you want to experiment further, feel free. We will discuss what you've done, and try out some other possibilities during quiz section. *Don't forget to bring your clickers!*

You may notice that this simulation also allows you to use only black daisies. Perhaps this will provide some insight into one of your homework problems.