

Atmospheric Sciences 101
Homework #5

Name _____
Section _____

Autumn 2009

Due: Thursday, December 10, 2009

1. One day you notice that you can see objects very far away, far beyond the usual horizon and some objects seem much higher than normal. What can you deduce about the vertical temperature structure in the lower atmosphere? Explain your answer.
2. Would the day be longer or shorter if there was no atmosphere? Why?
3. During wintertime periods of unusually cold weather (teens to low 20s) over the Puget Sound lowlands, there is often a line of clouds (directed N-S) along the Sound. Why do you think this occurs?
4. Fifty million years ago, the earth was warmer than today and the differences in temperature between the tropics and poles were far less. How do you think the strength of the jet stream during that period compared to the jet stream of today? Explain your answer.
5. Why are there so few thunderstorms over western Washington compared to the eastern portion of the U.S.? Why are we as likely to have thunderstorms in the winter as the summer?