

UNDERSTANDING THE ATMOSPHERE

Go to <http://formontana.net> and then click on picture # 49. Look at the image and read the explanation below the image.

Here is the best way to do these assignments.

- A. Read the entire explanation on the web site first.
- B. Answer as many questions as you can based on what you have read.
- C. For those questions that you can't answer, go back and find the answers in the explanation.

1. Any ball traveling through the air is going to be pulled toward Earth by gravity. Its movement will also be slowed by friction. Explain how air molecules cause this friction.

2. Why would a football (or any sort of ball) fly farther on a warm day?

3. Why would the ball travel farther Butte than it would in Billings?

4. Why are air molecules closer together at lower elevations like Seattle than they are at higher altitudes like Denver?

5. When it is really warm out, does it take more air, or less air to inflate a football? How does this affect the weight of the ball?

INVERSIONS

Go back to <http://formontana.net> and then click on picture # 18.

6. Use a dictionary or other source (dictionary.com) to provide a definition for the word "inverted." Write out a definition IN YOUR OWN WORDS.

7. When you sleep without a blanket, you get cold. Why are clouds like a “blanket” for the Earth?

8. What three conditions are needed for inversions to form?

9. Why might inversions contribute to poor air quality?

10. Why does it typically get colder as you get farther from the Earth’s surface?

11. Right now both you and the Earth are “radiating infrared energy”. IN YOUR OWN WORDS, explain what the phrase “radiating infrared energy” means? If you put your hand about an inch from someone’s bare skin, you can feel this infrared energy.

12. Why is it easier for inversions to form in towns like Missoula, Butte, and Helena? (Hint: The first sentence beneath the photos provides a clue.)

13. Why are inversions less likely in towns such as Great Falls and Billings?

NOTE

Remember, you need to score at least 85% on each assignment to get credit for it. If your score is less than 85% on any assignment, you will have to make corrections (“Fix it”), and then turn it back in.