

**Web Assignment – Unit 2 – The Chemical Constituents of Cells and Metabolism**

Please visit the American Scientist website at <http://www.americanscientist.org/issues/pub/for-a-few-atoms-more/1> and read the article titled *A Few Atoms More* by Roald Hoffman. You may want to click on the printer friendly link to print it for easier reading. There are a total of six pages on the website, so don't just read what you see on the screen and think that is all you have to read to complete the assignment. When you have finished reading the article, respond to the following questions and send the completed assignment via email to Mrs. Michaelsen at [dmichaelsen@cwasd.k12.wi.us](mailto:dmichaelsen@cwasd.k12.wi.us). Please include your name and the name of the assignment in a header at the top of the page. Thank you.

1. What principle sex hormone is produced in the body and what type of compound is it? What does the term for that compound mean?
2. What is the framework of a steroid compound? Explain this in more than one sentence.
3. What functions does testosterone serve within the body?
4. Explain the relationship between testosterone and other hormones (e.g. female sex hormones and the like). How are they similar/different?
5. Testing for abuse in professional athletes is not a simple process. The article explains that individuals have varying amount of testosterone (two types) in their blood, making it difficult to detect abuse. Even so, science can win on this one. Describe how.
6. What is a placebo? Explain it in the case of cyclist Floyd Landis.
7. What great business did the Bay Area Laboratory Cooperative (BALC) have going? Explain.
8. What were these substances and how and when was the second one discovered?
9. What is another "designer steroid" that has been developed? How harmful can these be and why?
10. Explain why people would take the risk and add these hormones to their body.
11. Do you see any dangers in how this industry has changed in terms of the effect on the young children today (who will be adults in 10-20 years)? What expectations will they have regarding athletic ability and performance?