Worksheet to teach balancing equations

Directions:

1. Start Internet Explorer go to Classic Chembalancer.
2. Click ‘Directions’. Read and understand the directions.
3. Click ‘OK’.
4. Click on ‘Start Game’
5. Try entering some numbers in the text boxes in front of each molecule. What happens?
6. If you forget the directions, click on the ‘How to Play the Game’ link. Click ‘OK’ when you finish reading them to return to the game.
7. When you think you have typed the right numbers in all the boxes, click the ‘Balanced’ button.
8. If you didn’t get it right, try again.
9. If you did get it right, then fill in the correct answers on this worksheet for #1.
10. Repeat steps 7-9 for the other 10 questions.
11. Now do the two problems on the back of this worksheet. You can draw the molecules just like the program did to figure out the answer.

Questions

Fill in the blanks below as you go though the game. This is so I have a record that you did your assignment.

1. _____ Fe + _____ S --> _____ FeS

2. _____ H2 + _____ Cl2 --> _____ HCl

3. _____ Mg + _____ O2 --> _____ MgO

4. _____ O2 + _____ H2 --> _____ H2O

5. _____ HgO --> _____ Hg + _____ O2

6. _____ Ca + _____ H2O --> _____ Ca(OH)2 + _____ H2
7. _____ CH4 + _____ O2 --> _____ CO2 + _____ H2O

8. _____ Na2O2 + _____ H2SO4 --> _____ Na2SO4 + _____ H2O2

9. _____ N2 + _____ H2 --> _____ NH3

10. _____ Al + _____ O2 --> _____ Al2O3

11. _____ KMnO4 --> _____ K2O + _____ MnO + _____ O2

Draw the molecules just like the program did to figure out the answer to #12 and #13.

12. _____ Na + _____ H2O --> _____ NaOH + _____ H2

Fact for #12: Sodium metal, Na, is stored in kerosene so it won’t react with water vapor. When added to water it reacts quickly to make hydrogen gas.

13. _____ H2SO4 + _____ NaOH --> Na2SO4 + _____ H2O

Fact for #13: This is an example of an acid base reaction. Acid + base --> Salt + Water