

*Hoboken Charter School*

# *Chemistry*



*December 2009*

*Mr. H. Alpert*

# A chemical Scavenger Hunt

- Your mission is to work with a partner to collect as many of the chemical items listed below by number (1-30)
- You may use any source you like, but you are to be as original as possible.
- Vitamin pills are not allowed since they defeat the purpose of the assignment.
- The items may be collected in three different ways:
  - Real
  - Photograph
  - A sketch
- You will ultimately display your items on either a poster board or in a scrap book.
- All the items will first be collected and then placed in a large envelope.
- You and your partner will create a hanging folder with your names on it.
- You will choose a team name to identify yourselves.
- You will put your materials in an envelope and your hanging folder while you are searching.
- You will save all of your written work including images in a folder in one partner's school assigned computer files.
- It is recommended that you share your password with your partner in case one of you is absent during the time we work on this project.
- You may use one item for more than one of the numbers.
- All items must be labeled with the number(s) that they represent.
- Each item must be in numerical order, so that the grading process is efficient.
- Each item must have a brief description and why you chose it.
- You will work three days per week on this project with the aim of finishing it before Christmas vacation.
- Fridays in class will be reserved for practicing the lesson of the week (balancing equations, names of compounds, molar masses, types of reactions etc.)
- Grades will be based on the scoring sheet at the end of this assignment.
- Completeness and aesthetics of your presentation are important.
- You will be asked to complete a survey as to how you found the items and why they are important to the study of chemistry.
- You will not understand all of the questions on the scavenger hunt, but may use the internet to find out what they are.
- Mr. Alpert will help each team create a bag with one mole (58.4 grams) of NaCl in it.
- From time to time, Mr. Alpert may give each team an item which is particularly hard to find.
- You must have at least ten items which are ***actual samples***, not drawings or pictures. For example, you must have one mole of salt or other molar substance pasted on your board/ scrapbook.
- Good luck and happy hunting!

Team Name: \_\_\_\_\_ Partners\_(2 only)\_\_\_\_\_

**GROUP A**

1. Sample of something malleable  
\_\_\_\_\_
2. Something containing sulfur  
\_\_\_\_\_
3. A newspaper article with a chemistry theme  
\_\_\_\_\_
4. A container labeled with the metric unit for volume  
\_\_\_\_\_
5. Something with a density greater than 1.00 g/ml  
\_\_\_\_\_
6. The result of a chemical change  
\_\_\_\_\_
7. Allotropic form of carbon  
\_\_\_\_\_
8. An ionic compound  
\_\_\_\_\_
9. Exactly one mole of something  
\_\_\_\_\_
10. A homogeneous mixture  
\_\_\_\_\_
11. Dilute acetic acid  
\_\_\_\_\_
12. Sample of something ductile  
\_\_\_\_\_
13. Sample of elemental Al  
\_\_\_\_\_
14. Food source of Chromium (a label from a food product or picture is fine)  
\_\_\_\_\_
15. Sample of elemental zinc  
\_\_\_\_\_
16. Sample of a hydrocarbon(a photo will do). Find this on the web.  
\_\_\_\_\_
17. Something containing Potassium  
\_\_\_\_\_
18. A covalent molecule  
\_\_\_\_\_
19. A polymer  
\_\_\_\_\_
20. A sample of a heterogeneous mixture  
\_\_\_\_\_
21. Silicon dioxide  
\_\_\_\_\_
22. Sample of elemental iron  
\_\_\_\_\_
23. Sample of something brittle  
\_\_\_\_\_

- |   |       |       |
|---|-------|-------|
| 24. Food source of Mn (label, picture is fine)        | _____ | _____ |
| 25. An electrolyte (may be a food label or a picture) | _____ | _____ |
| 26. A container with metric measurement for mass      | _____ | _____ |
| 27. Sample of an electrical conductor                 | _____ | _____ |
| 28. Sample of elemental Cu                            | _____ | _____ |
| 29. Three compounds containing Carbon                 | _____ | _____ |
| 30. A picture or a sample of an alloy (amalgam)       | _____ | _____ |

**Scoring**

- Items collected at 1 point each.....maximum 30 points
- At least ten "live" samples (not pictures).....1 to 5 points
- Organization and aesthetics.....1 to 5 points
- Team effort (you will be asked to fill out a form).....1 to 5 points
- Sources/ purpose of the project and its relationship to Chemistry.....1 to 5 points

Maximum score: 50 points

Team Name: \_\_\_\_\_ Partners \_\_\_\_\_

**GROUP B**

1. Food source of Selenium (label or picture is fine)

2. An insulator (non-conductor of electricity)

3. Something containing an inert gas (a picture will do)

4. Substance with a pH of 7 (find this on the web)

5. Substance with a density less than 1

6. A source of calcium

7. Substance containing a halogen

8. A picture of the man who invented dynamite.

10. A picture of the woman who discovered Radium

11. A chemical base

12. Food source of Boron (label and picture)

13. A catalyst (search this on the web)

14. A material which contains exactly 200 calories

15. The chemical formula for aspirin

16. A substance containing Tin (II) Fluoride

17. Something magnetic

18. Sucrose

19. An Oxygen containing substance

20. A solvent containing a covalent compound

21. A sample of something that contains Beta carotene

22. A substance with a boiling point below that of water

23. A sample of Acetylsalicylic acid

24. A picture of Mendeleev's periodic table

25. A carcinogen \_\_\_\_\_
26. Something that has been oxidized \_\_\_\_\_
27. A hand drawing of a famous scientist (not Mr. Alpert!) \_\_\_\_\_
28. A picture or drawing of a use of the element Platinum \_\_\_\_\_
29. A picture of a substance (element or compound) which sublimates \_\_\_\_\_
30. A picture or a drawing or a sample of an alloy (amalgam) \_\_\_\_\_

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