

FIND THESE ELEMENTS!

H Hydrogen

Ni Nickel

C Carbon

N Nitrogen

Ag Silver

F Fluorine

Ne Neon

Na Sodium

Mg Magnesium

Al Aluminum

P Phosphorus

S Sulfur

Cl Chlorine

K Potassium

Ca Calcium

Cr Chromium

Fe Iron

Co Cobalt

He Helium

Zn Zinc

Cu Copper

O Oxygen

Sn Tin

I Iodine

Ba Barium

Au Gold

Hg Mercury

Pb Lead

U Uranium

Mn Manganese

Li Lithium

B Boron

Br Bromine

What are the following atom's numbers? (Atomic Numbers)

| | |
|----|----|
| Mg | 12 |
| Al | 13 |
| He | 2 |
| I | 53 |
| Cu | 29 |
| Fe | 9 |
| B | 5 |

| | |
|----|----|
| Ra | 88 |
| Sc | 21 |
| N | 7 |
| O | 8 |
| C | 6 |
| Be | 4 |
| Sn | 50 |

What does the atom's number tell us? # of protons

How heavy are the following atoms? (Atomic mass)

| | |
|----|-----------------------------|
| Ca | 24 ⁴⁰ |
| Li | 7 ⁷ |
| S | 32 |
| Mg | 24 |
| H | 1 |
| K | 39 |
| Zn | 65 |
| Ba | 137 |

| | |
|----|-----|
| Na | 23 |
| Au | 197 |
| Ni | 59 |
| Te | 128 |
| Br | 80 |
| Ne | 20 |
| F | 19 |
| W | 184 |



THE PERIODIC TABLE

A chemical element is any one of the known kinds of basic chemical substances. The periodic table arranges the elements in horizontal rows, called periods, according to their atomic number. Use the periodic table on page 59 and the clues about the elements below to identify the Russian chemist who devised the most common periodic table. The circled letters, when written in order at the bottom of the page, will spell out his name.

Which element . . .

1. has an atomic number of 86?

R A D O N

2. appears directly above sodium?

L I T H I U M

3. appears to the left of neon?

F L U O R I N E

4. has an atomic number of 7?

N I T R O G E N

5. appears directly above silver?

C O P P E R

6. has the symbol Fe?

I R O N

7. has the symbol K?

P O T A S S I U M

8. appears directly below tin?

L E A D

9. appears to the left of copper?

N I C K E L

10. appears directly below barium?

R A D I U M

11. has an atomic number of 53?

I O D I N E

12. appears directly below oxygen?

S U L F U R

13. has an atomic number of 1?

H Y D R O G E N

14. appears directly below phosphorus?

A R S E N I C

15. has an atomic number of 23?

V A N A D I U M

Who was the chemist?

D M I T R I M E N D E L E E V

An Elemental Tale: **THE GOLD DUST KID**



The kid mounted his trusty steed, old [B] **Boron**. His shooting [Fe] **Iron** strapped to his side, he headed out for the bright [Ne] **Neon** lights of Sabattus, aiming to rob the Litchfield stage. There was sure to be a load of precious [U] **Uranium** aboard, and probably [K] **Potassium**, too. Inhaling a deep breath of [O] **Oxygen** he coughed on the [S] **Sulphur** from the nearby mills. Since the [Hg] **Mercury** was climbing, he quenched his thirst with some H₂O, tasting the [Cl] **Chlorine** all big cities like Wales had. As he headed north his bones ached from [Ca] **Calcium** deposits built up over years of riding the [Zn] **Zinc** trail. Overhead a [He] **Helium** filled balloon floated in the breeze; the sun beat down like burning [P] **Phosphorous**.

Soon he spotted the stage, guarded only by a sheriff with a [Sn] **Tin** badge. "Halt," he yelled, "or I'll fill you full of [Pb] **Lead**." The sheriff drew his gun, but alas, was too slow. The kid's gun, blazing like flaming [Mg] **Magnesium** did the [Cu] **Copper** in. Anyone who drew on the Kid should know his life wasn't worth a plugged [Ni] **Nickel**. A [Pt] **Platinum** blonde riding beside the [Al] **Aluminum** - framed coach rode for her life when the Kid pulled out some [N] **Nitrogen** compounds, preparing to blow the safe to atoms.

Suddenly, a shout rang out, "Hi ho [Ag] **Silver**," and a masked man on a white horse raced across the [Si] **Silicon** sands like [Na] **Sodium** skittering on H₂O. A [H] **Hydrogen** bomb would not have stopped the lawman; the Kid had met his doom. The rest of his life was to be spent behind [Co] **Cobalt** steel bars, a warning to all who flirt with danger. Your first detention may be the initial step in a [C] **Carbon** copy life of the saga of the [Au] **Gold** Dust Kid.

