



Grade 9 Chemistry

Physical/Chemical Properties	History of the Periodic Table	Trends in the Periodic Table	Bohr-Rutherford Diagrams	Other
<u>200</u>	<u>200</u>	<u>200</u>	<u>200</u>	<u>200</u>
<u>400</u>	<u>400</u>	<u>400</u>	<u>400</u>	<u>400</u>
<u>600</u>	<u>600</u>	<u>600</u>	<u>600</u>	<u>600</u>
<u>800</u>	<u>800</u>	<u>800</u>	<u>800</u>	<u>800</u>
<u>1000</u>	<u>1000</u>	<u>1000</u>	<u>1000</u>	<u>1000</u>

P/C Properties:
200

**Is changing temperature a
quantitative or qualitative property?**

Quantitative

Back

P/C Properties:
400

**What is the difference between
malleability and ductility?**

*Malleability – ability to be
hammered into a thinner sheet
Ductility – ability to be drawn
(pulled) into a finer strand*

Back

P/C Properties:
600

Name 3 clues that a chemical change occurred.

*Change in colour, odour,
temperature, light
Precipitate forms, bubbles form*

Back

P/C Properties:
800

What is a physical change? Give an example.

*The composition of a
substance remains unaltered
and no new substances are
produced. Folding paper*

Back

P/C Properties:
1000

**A piece of wood that measures 3cm
by 6cm by 4cm has a mass of 80g.
What is the density of the wood?
Would the piece of wood float in
water?**

$d = 1.11\text{g/cm}^3$
It will sink.

Back

History: 200

What did Chadwick discover?

Neutron

Back

History: 400

What did Rutherford's Gold Foil experiment conclude?

Presence of a large nucleus with a positively charged proton inside.

Back

History: 600

Explain J.J. Thompson's Plum Pudding Model.

Negatively charged electrons (raisins) inside a positively charged space (cake).

Back

History: 800

Who organized the modern periodic table and how did he do this?

Mendeleev; organized the periodic table by physical and chemical properties.

Back

History: 1000

Explain Dalton's Billiard Ball Model.

All matter is made of elements; atoms of the same element are identical; atoms of different elements are different; atoms rearrange to form new substances.

Back

Trends: 200

What is Group 17 called?

Halogens

Back

Trends: 400

Name two common uses of alkali metals.

Na – used in table salt

Li – used in batteries

K – found in bananas

Back

Trends: 600

**What is the relative mass of a proton,
a neutron and an electron?**

Proton = 1

Neutron = 1

Electron = 1/2000

Back

Trends: 800

**What trend do you see as you go
down a group on the periodic table?**

Number of orbitals increases

Number of valence electrons

remain the same

Back

Trends: 1000

How does the number of valence electrons of an atom relate to its reactivity?

Atoms always want to have a full valence shell to be stable. The closer an atom is to stability, the more reactive it is.

Back

Bohr-
Rutherford: 200

How many protons are in Silicon?

14 Protons

Back

Bohr-
Rutherford: 400

Find the number of protons, electrons
and neutrons for

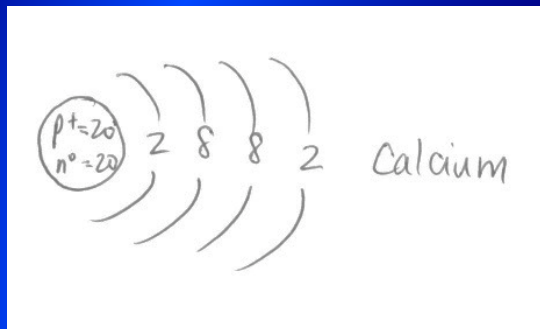


Protons = 6
Electrons = 6
Neutrons = 8

Back

Bohr-
Rutherford: 600

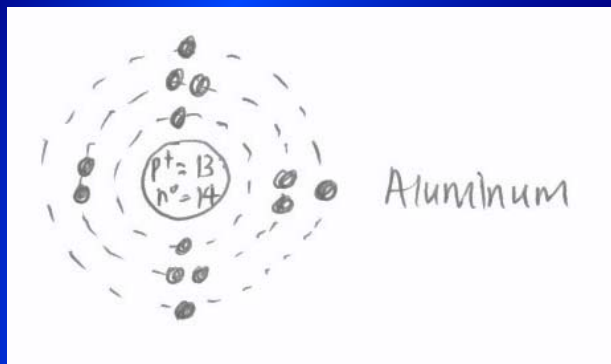
Draw the condensed notation Bohr-
Rutherford Diagram for Calcium.



Back

Bohr-
Rutherford: 800

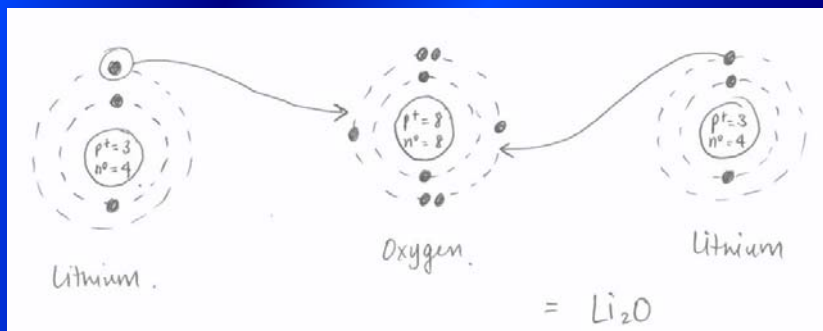
**Draw the complete Bohr-Rutherford
Diagram for Aluminum.**



Back

Bohr-Rutherford:
1000

**Draw the formation of Lithium oxide
using a complete Bohr-Rutherford
Diagram.**



Back

Other: 200

**What is the term for this:
Solid → Gas**

Sublimation

Back

Other: 400

**What is bigger?
43 mg OR 5 g**

5g

Back

Other: 600

Compare and Contrast Graphite and Diamond.

Similarity – Both are made of carbon

Graphite – Sheets of carbon

Diamond – 3D structure of carbon

Back

Other: 800

You conduct gas tests. Explain what the result is for a hydrogen test, an oxygen test and a carbon dioxide test.

Hydrogen – pop sound

Oxygen – re-ignite a flame

Carbon Dioxide – extinguishes a flame

Back

Other: 1000

Given: F_2 CO_2 Zn $BeCl_2$

Find the:

a) Element

Element = F_2 Zn

b) Compound

Compound = CO_2 $BeCl_2$

c) Atom

Atom = Zn

d) Molecule

Molecule = F_2 CO_2 $BeCl_2$

Back