

**Prospectus Novus School
Natural Sciences
Grade 8V**



Activity 2.1 (Atoms – Building blocks of matter)

1. Define the following terms:
 - a. Periodic table
 - b. Element
 - c. Atomic number
 - d. Mass number
 - e. Noble gases
 - f. Periods
 - g. Groups
 - h. Atom
 - i. Substance
 - j. Particle
2. Explain what you will find in each block of the periodic table
3. Here is an alphabetical list of the symbols for the first 20 elements: Al, Ar, B, Be, C, Ca, Cl, F, H, He, K, Li, Mg, N, Na, Ne, O, P, S, Si. Put the elements in order and supply the name for each symbol
4. Find the metals: iron, copper and zinc on the periodic table. Draw their blocks over.

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Activity 2.2 (Sub-atomic particles)

1. Define the following terms:
 - a. Sub-atomic particle
 - b. Nucleus
 - c. Proton
 - d. Neutron
 - e. Electron
 - f. Charge
 - g. Model
2. Draw a figure to explain the different parts of an atom

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Activity 2.3 (Practical activity) (Sub-atomic particles – model of an atom)

AIM: In this activity you will make a model of an atom using everyday materials

MATERIALS:

Dried lentils
Paper plate

Dried peas
Glue

Dried barley
Koki pens

METHOD

- Step 1** Choose an element from the Periodic Table. Write down the number of protons, neutrons and electrons in the element
- Step 2** Use the lentils for protons, the peas for neutrons, and the barley for the electrons. Stick the protons, neutrons and electrons onto the plate with glue
- Step 3** Label the protons and neutrons making up the nucleus
- Step 4** Label the electrons in space around the nucleus
- Step 5** Write the name and symbol for the element of your atom on the back of the plate

*Explain and describe your model to the class

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Activity 2.4 (Practical activity)
(Elements and compounds – Make models of molecules)

AIM: In this activity you will make models of several different molecules

MATERIALS:

Plasticise or playdough in at least two different colours

METHOD

- Step 1** Use the periodic table to help you
- Step 2** Make models of each of these molecules
- O₂; CO; H₂O; CO₂; CuO; NaCl; SO₃
- Step 3** Make a drawing of each model