BUILDING ELEMENTS
A WEAVERSOFT PRODUCT

A program on the building blocks of atoms
– protons, neutrons and electrons –
and how they are arranged in the atoms
of the elements.

WEAVERSOFT *** BUILDING ELEMENTS *** 48K ZX SPECTRUM

Load the program into your Spectrum by doing LOAD "". You will then be faced with a menu of six options, which you select by pressing the appropriate key.

YOU CAN ALWAYS GET BACK TO THE MENU FROM ANYWHERE IN THE PROGRAM BY PRESSING OR ENTERING 'M'.

Other Weaversoft products which are useful in this area of Chemistry include "Atoms" and "Ions & Electrolysis".

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The water in the ocean, a plastic spoon, your little finger and a distant star – they are all made out of atoms! The miracle is that all of the tremendous variety of different substances in the universe is made out of just 92 kinds of atoms – the chemical elements – and that all the atoms that exist are made out of just THREE smaller particles:-

PROTONS and NEUTRONS and ELECTRONS.

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When you have the starting menu, press 1 to find out about the properties of these particles and how they build up the atoms of some of the common elements. At the end of this option, you will have the opportunity to see how these particles are arranged in atoms.

SEE OVERLEAF FOR THE PERIODIC TABLE AND MORE OPTIONS!

When you have run through Option 1, see if you can use your knowledge of atoms to build them up from protons, neutrons and electrons, using Option 2.

You may be able to discover the best way to put the particles together in order to produce hydrogen, helium, lithium, etc. – in the order in which they appear in the Periodic Table.

If you would like to compete with a friend in building up elements, then choose Option 3, and see how many elements you can discover before your time runs out.

ISOTOPES! You may have heard of these – some are radioactive, others are used as tracers for detecting where chemicals end up in living things, others for dating fossils.

Choose Option 4 to find out exactly what isotopes are, then test yourself with Option 5 to see if you can figure out what an atom is made of using the Mass Number and Atomic Number.

DON'T WORRY IF YOU CANNOT WORK IT OUT AT FIRST!

Just keep putting in guesses until gradually the pattern will become obvious. This is the best way to learn – by experiment!

Option 6 is a database on the isotopes of the first twenty elements in the Periodic Table – you may like to do a bar chart showing the percentages of each isotope in the common elements.

THE PERIODIC TABLE

H 1

			Group number					8
								He 2
1	2		3	4	5	6	7	
Li 3	Be 4		B 5	C 6	N 7	O 8	F 9	Ne 10
Na 11	Mg 12		Al 13	Si 14	P 15	S 16	Cl 17	Ar 18
K 19	Ca 20	Transition metals						

The numbers in the boxes are the atomic numbers of the elements.