



Contents



TEACHER GUIDE

• Assessment Rubric	4
• How Is Our Resource Organized?	5
• Bloom's Taxonomy for Reading Comprehension	6
• Vocabulary	6



STUDENT HANDOUTS

• Reading Comprehension	
1. <i>What Are Atoms?</i>	7
2. <i>What Are Molecules?</i>	13
3. <i>What Are Elements?</i>	18
4. <i>What Are Compounds?</i>	22
5. <i>The Periodic Table</i>	26
6. <i>Patterns In the Periodic Table</i>	31
7. <i>Properties of Important Elements</i>	36
• Hands-on Activities	42
• Crossword	46
• Word Search	47
• Comprehension Quiz	48



EASY-MARKING™ ANSWER KEY	50
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MINI POSTERS	55
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Assessment Rubric

Atoms, Molecules & Elements

Student's Name: _____ Assignment: _____ Level: _____

	Level 1	Level 2	Level 3	Level 4
Understanding Concepts	Demonstrates a limited understanding of concepts. Requires teacher intervention.	Demonstrates a basic understanding of concepts. Requires little teacher intervention.	Demonstrates a good understanding of concepts. Requires no teacher intervention.	Demonstrates a thorough understanding of concepts. Requires no teacher intervention.
Analysis & Application of Key Concepts	Limited application and interpretation in activity responses	Basic application and interpretation in activity responses	Good application and interpretation in activity responses	Strong application and interpretation in activity responses
Creativity and Imagination	Limited creativity and imagination applied in projects and activities	Some creativity and imagination applied in projects and activities	Satisfactory level of creativity and imagination applied in projects and activities	Beyond expected creativity and imagination applied in projects and activities
Application of Own Interests	Limited application of own interests in independent or group environment	Basic application of own interests in independent or group environment	Good application of own interests in independent or group environment	Strong application of own interests in independent or group environment

STRENGTHS:

WEAKNESSES:

NEXT STEPS:



What Are Atoms?

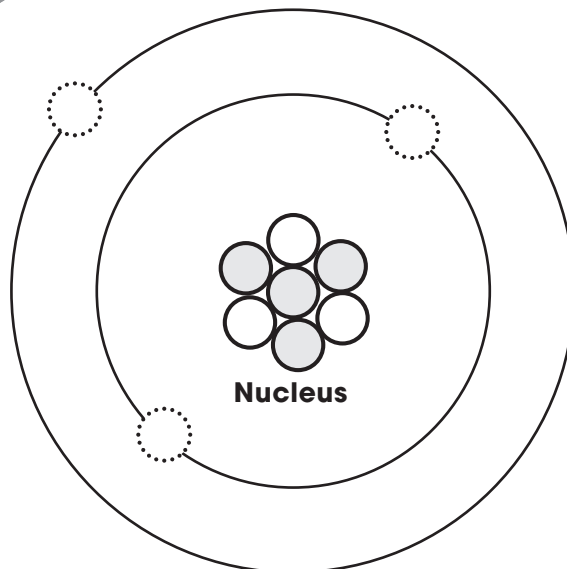


5. a) Complete the table with information from the reading passage.

Atom Part	A. How much mass? A lot or a little?	B. Electrical Charge plus, minus, or zero?	C. Position inside or outside the nucleus?	D. Which two have about equal mass?
Electron				
Proton				
Neutron				

b) Label the parts of the atom in the diagram below. Write **E** in the circle if it is an ELECTRON. Write **P** in the circle if it is a PROTON. Write **N** in the circle if it is a NEUTRON.

Atomic Model





What Are Compounds?

You have learned that molecules are particles made of more than one atom. If the atoms in the molecules of a material are the same, the material is an element. If the atoms in the molecules of a material are different, the material is a **compound**.

Remember that atoms and molecules are very small particles. Elements and compounds are materials made of many particles. The particles in a compound are always molecules, not atoms. Because the particles of a molecule have more than one kind of atom, they must have more than one atom. Particles with more than one atom are molecules.



Oxygen



Salt



Sugar

Explain why water is a COMPOUND and not an element.

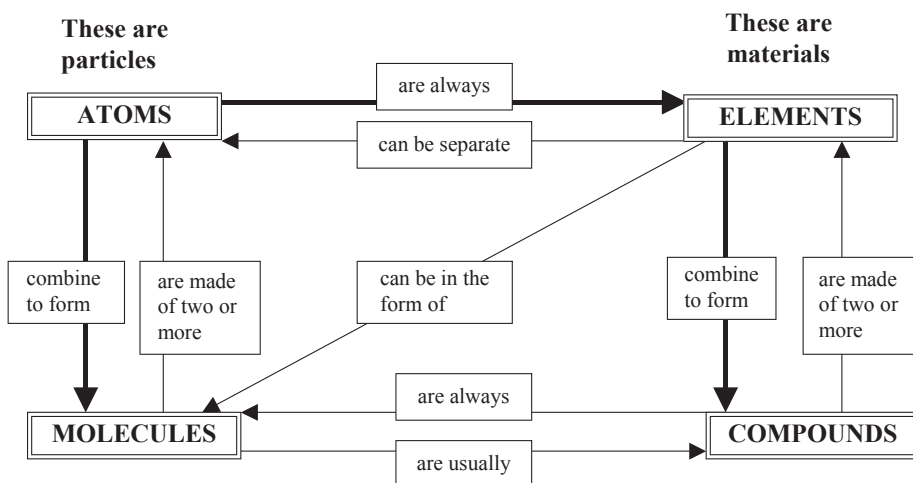


Remember we learned that all pure materials are made of just one kind of atom or just one kind of molecule. Also pure materials are made of only one element or only one compound.

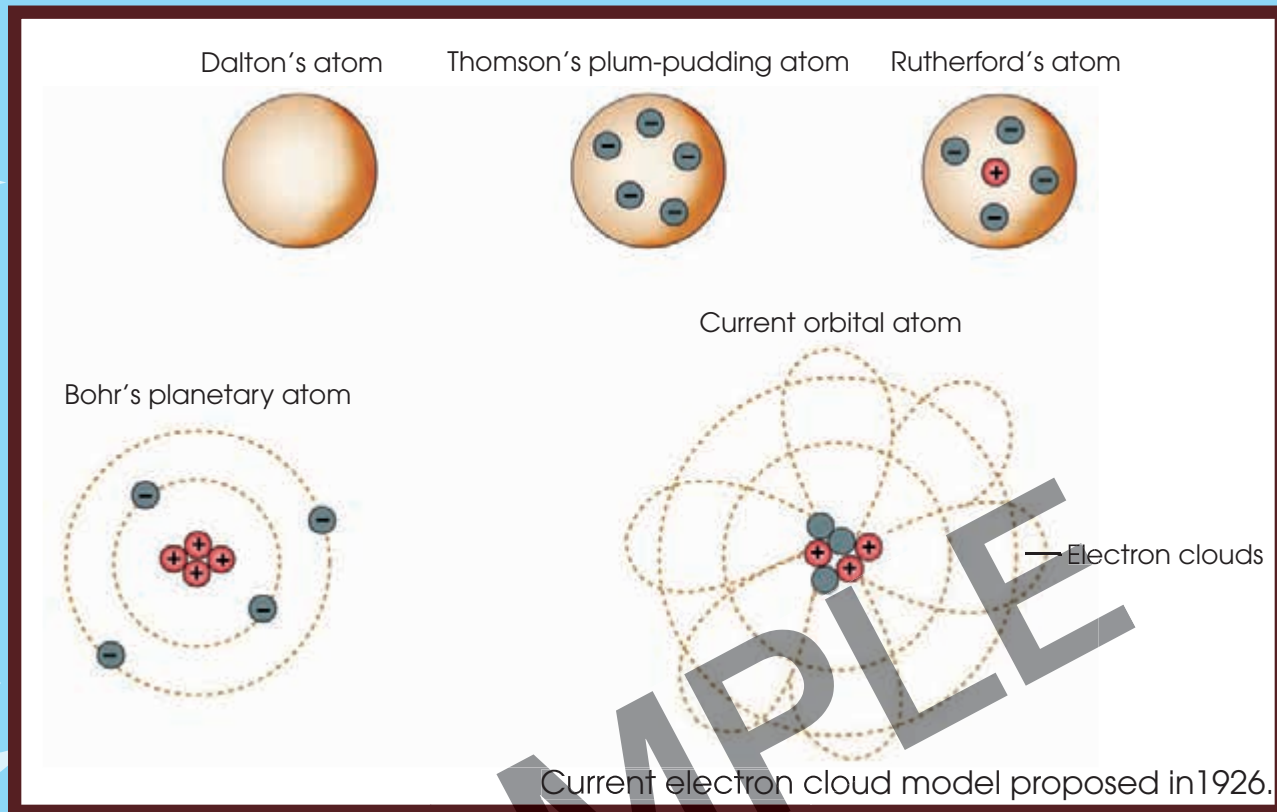
These are some common elements you may have heard of: hydrogen, helium, carbon, nitrogen, oxygen, neon, aluminum, chlorine, calcium, nickel, copper, silver, iodine, gold, tin, mercury, and lead.

These are some common compounds you may have heard of: salt, sugar, water, rust, and carbon dioxide.

We have been studying four words that are easy to confuse: atoms, molecules, elements, and compounds. This diagram may help you keep them straight. Follow the direction that the arrows point to make sentences. For example, at the top: "**ATOMS** are always **ELEMENTS**." The most important sentences have thick arrows.



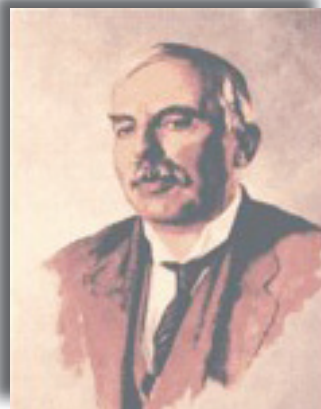
History of the Atomic Model



Dalton
1803



Thompson
1897



Rutherford
1909



Bohr
1913