



Srini Science Mind
Abdul Kalam Physical Science Group



NEW

9th class

PHYSICAL SCIENCE

LESSON PLAN with BYJU's Content

Visit: [srini science mind](http://srini-science-mind.com)



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MODEL LESSON PLAN

CLASS: 09

SUBJECT: PS

Name of the Teacher: M.Srinivasa Rao

Name of the School: SPSMH School, Gudivada

Name of the Lesson/Unit	Topic	No.of Periods Required	Timeline for teaching		Any specific information
			From	To	
Atoms and Molecules (Chapter-3)	Introduction – laws of Chemical Combination	1			
	Laws of Conservation of Mass	1			
	Laws of Constant Proportion	1			
	What is an Atom?	1			
	BYJU's Content Review	1			
	What are the modern day symbols of atoms of different elements?	1			
	Atomic Mass and How do atoms exist?	1			
	What is a Molecule? And Molecules of Elements	1			
	Molecules of Compounds	1			
	BYJU's Content Review	1			
	What is an Ion?	1			
	Writing Chemical Formulae	2			
	Formulae of Simple Compound	1			
	Molecular Mass	1			
	Formula Unit Mass	1			
BYJU's Content Review	1				

Prior Concept/Skills:

1. What is the formula for water molecule?
2. Does the weight of an iron rod increase or decrease, on rusting?
3. What is the symbol of Hydrogen?

Learning Outcomes:

- 1, Explains processes of law of conservation of mass.
2. Plans and conducts experiments to arrive at and verify the law of conservation of mass.
3. Explains processes of law of constant proportions
4. Draws conclusion of elements combine chemically in a fixed ratio to form compounds.
5. Differentiates of elements based on their properties.
6. Uses scientific conventions, symbols of elements, formulae of simple compounds.
7. Describes scientific discoveries and inventions of elements

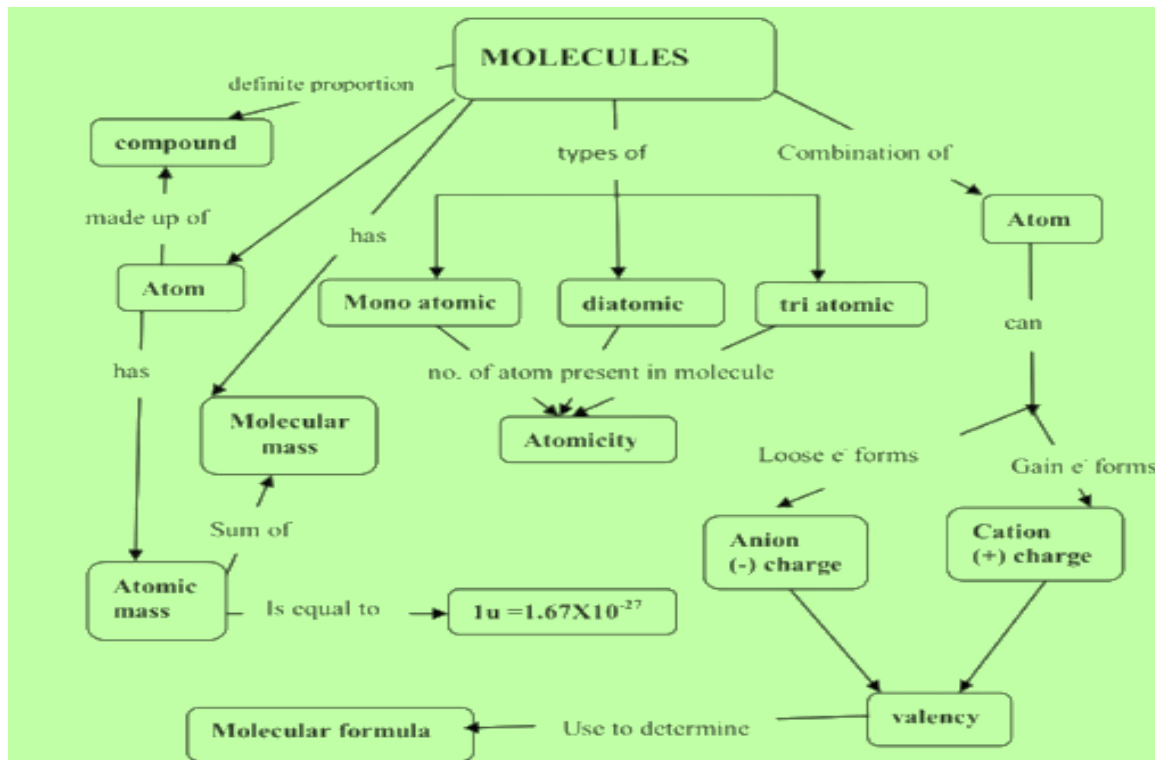
No. of Periods

- 1
1
1
1
1
2
2

8. Applies learning to hypothetical situations of Atomicity	1
9. Applies scientific concepts in the daily life of molecular mass.	1
10. Measures of molar mass, mass of atoms and mass of molecules.	1
11. Calculate using the data given of molecular mass of the substances.	1
12. Calculate using the data given of formula unit mass.	1

TEACHING LEARNING PROCESS

Induction/Introduction:



Experience and Reflection:

1. Students will refer to some elements that they use in their daily life with symbols.
2. Students explore the principles involved in writing molecular formulae in an easy way.
3. Students will solve problems based on the concept of the molar mass.

Explicit Teaching/Teacher Modelling (I Do)	Group Work (We Do)	Independent Work (You Do)	Notes for:
1. Discussion on the establishment of atoms and Appreciations of Scientists.	1. "Inside the matter" – Group discussion	1. Students know the Antoine L. Lavoisier	1. Who is the father of modern chemistry?

2. Explain and Conduct an activity on Law of conservation of mass	2. Students arrange the required materials for the experiment.	2. Students measure the weight of flask and contents before mixing and after mixing.	2. State the law of conservation of mass.
3. Discussion and explain the Law of constant proportion.	3. Students read the Joseph L. Proust history.	3. Students write the definition of law of constant proportions.	3. Why the law of definite proportions is not applicable to nitrogen oxide?
4. Discussion and explain the postulates of Dalton's Atomic theory.	4. Which postulate of Dalton's theory can explain the law of constant proportions? - Group discussion.	4. Students write the postulates of Dalton's atomic theory.	4. What is the difference between atom and molecule?
5. Discussion on Atoms and their sizes	5. Students are told the names of some known elements.	5. Students complete the homework.	5. Write symbols of a few elements?
6. Review of Byju's tab content	6. Viewing the content in Byju's Tab	6. Viewing the content in Byju's Tab	6. Define the atomic mass unit.
7. Discussion and explain the symbols of elements.	7. Students collect information on some unusual symbols of elements.	7. Students write a table that contains element name and symbol	7. What is the atomicity of inert gases?
8. Discussion and explain Atomic mass	8. Students collect the atomic mass of a few elements	8. Students complete the homework.	8. What is an ion? How many types?
9. Explain the molecules of elements.	9. Why do elements have different atomicities? – Group discussion	9. Students give examples of elements.	9. Can atoms exist independently?
10. Explain Atomicity.	10. Viewing the content in Byju's Tab	10. Students write the definition of Atomicity.	10. What is the formula of ammonium carbonate using Criss Cross method?
11. Review of Byju's tab content	11. Students collect information on valencies of elements.	11. Viewing the content in Byju's Tab	11. What is responsible for mass of atom?
12. Discussion and explain the valencies of elements, and ions	12. Students count the number of atoms present in given molecules.	12. Students give a reason, Why elements show variable valency?	
13. Discussion and explain molecules of Compounds.	13. Students write chemical formulae of molecules in criss-cross method.	13. Students complete the homework	
14. Discussion and explain the write chemical formulae of molecules in criss-cross method by using valency.	14. Students calculate the molecular mass of given substances.	14. How can you write the formula of a compound by Criss-Cross method?	
15. Explain the concepts of Molecular mass and formula unit mass.		15. Students solved problems on molecular mass.	

16. Review of Byju's tab content	15. Viewing the content in Byju's Tab	16. Viewing the content in Byju's Tab	
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Check For Understanding Questions		TLM's (Digital + Print)
<p>1. Factual:</p> <ol style="list-style-type: none"> How did the element Helium get its name? What is the use of symbols for elements? Why is it not possible to see an atom with naked eye? <p>2. Open Ended/Critical Thinking:</p> <ol style="list-style-type: none"> Why is the atom electrically neutral? What is the difference between formula mass and molecular? How do symbols affect our society? <p>3. Student Practice Questions & Activities:</p> <ol style="list-style-type: none"> What are polyatomic ions? Give examples. Give the names of the elements present in the following compounds. (a) Quick lime (b) Hydrogen bromide (c) Baking powder (d) Potassium sulphate A 0.24 g sample of compound of oxygen and boron was found by analysis to contain 0.096 g of boron and 0.144 g of oxygen. Calculate the percentage composition of the compound by weight. Calculate the molar mass of Ethyne (C₂H₂) 		<ol style="list-style-type: none"> Used prepared Quiz paper. Utilized digital classroom. Provide video links QR codes, DIKSHA App YouTube video links Byju's Tab IFP
<p>Assessment:</p> <ol style="list-style-type: none"> State the law of conservation of mass in a chemical reaction. Describe an activity that can be used to verify this law. Write the chemical formulae of the following. (a) Magnesium chloride (b) Calcium oxide (c) Copper nitrate (d) Aluminium chloride (e) Calcium carbonate. List out at least 20 elements and their symbols. Calculate the molar mass of Hydrochloric acid (HCl) 		

SIGNATURE OF THE TEACHER

SIGNATURE OF THE HEADMASTER

VISITING OFFICER WITH REMARKS