BHAVAN'S BHAGWANDAS PUROHIT VIDYA MANDIR, NAGPUR

CURRICULUM PLAN
(2023-24)

STD: IX SUBJECT: CHEMISTRY

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BHAVAN'S B.P. VIDYA MANDIR, NAGPUR
REVISED CURRICULUM PLAN
2023-2024
SUBJECT :- CHEMISTRY
STD :- IX

MONTH	WEEKLY DATES	NO. OF PERIODS	NAME OF THE CHAPTERS	TOPICS	NO.OF PERIODS REQUIRED	ACTIVITIES/ SMART CLASS MODULE	ASSIGNMENTS	LEARNING OUTCOMES/SDG/SKILLS ASSESSED
April	1st week 5-8	1	**1.Matter in our surroundings**	Introduction 1.1Physical nature of matter	1	**ICT:** Particulate nature of matter **EXPERIENTIAL LEARNING:** (Pg 1- fig 1.1- Activity - Particles get into the space)	Students are asked to write short note on 1.1.1 & 1.1.2	**Students will be able to :** Interpret Physical nature of matter **SKILLS ASSESSED:** Identification
April	2nd week 10-15	3		1.2 Characteristics of particles of matter 1.3 States of matter	2 1	**EXPERIENTIAL LEARNING:** (Pg 2- fig 1.2 How small are the particles of matter Dissolution of coloured salts in water to show particle nature of matter. **ICT:**Diffusion in solids,liquids and gases. Diffusion of gases shown by lighting of incense stick.	Students are asked to learn the characteristics of states of matter. Intext questions given as a part of assignment.	Understand Characteristics of particles of matter. Apply the knowledge gain from the activities of diffusion and dissolution in daily life.

						LEARNING BY DOING: Act. 1.6 – Particles of matter attract each other. Dissolution in hot water to study effect of temperature.		**SKILLS ASSESSED:** Critical thinking, Problem solving, Logical thinking
April	3rd week 17-21	2		1.4 Can matter change its state?	2	**ICT:** Effect of change of temperature. **ICT:** Effect of change of pressure	Assignment given on temperature conversion from ^{0} C to K and viceversa.	Understand the role of factors like temperature and pressure in change of state of matter
April	4th week 24-29	3		1.4.1 Effect of change of temperature 1.4.2 Effect of change of pressure	2 1	**Lab activity** is conducted to determine melting point of ice and boiling point of water.	To learn question and answers from recapitulation sheets	**SKILLS ASSESSED:** Observation and calculation skill
May	Ist week 2-4	1		1.4.2 Effect of change of pressure (Contd.)	1	**GROUP DISCUSSION AND PEER EVALUATION:** Fig. 1.9 Interconversion of three states of matter.	To study and draw flowchart of interconversion of states of matter.	**SKILLS ASSESSED:** Cooperative learning, Design thinking
June	4th week 20-24	2		1.5 Evaporation	2	**ICT:** Process of evaporation **LEARNING BY DOING:** A demonstration to show cooling effect due to	Textual question given as a part of assignment.	**Students will be able to-** Apply the concept of evaporation in day to day life

						evaporation using ether and acetone. **ICT:** Evaporation Vs boiling **ICT:** Various factors affecting evaporation. **Activity:** Quiz based on Matter and its properties		**SKILLS ASSESSED:** Using space time relation
June July	5thweek 26-30 1st week &2nd week 1,3-7	2 3	**Is matter around us pure?**	1.5.1 Factors affecting evaporation Application of evaporation. Discussion of question and answers Introduction	1 1 2 1	**ICT:** Mixture **ICT:** Solution		Students will be able to distinguish between homogeneous and heterogeneous mixtures.

July	3rd week 10-15	3		2.1 Mixture 2.1.1 Types of mixture	1 2	**INQUIRY BASED LEARNING:** A lab activity is performed to prepare and study the properties of true solutions ,suspensions and colloids. **ICT:** Tyndall effect		**Students will be able to** distinguish between dilute and concentrated solutions. **SKILL ASSESSED:** Comparative thinking **Students will be able to** Understand the properties of solution Suspension and colloid **SKILLS ASSESSED:** Understanding, Application, Decision making
July	4th week 17-22	3		2.2 Solution 2.2.1Concentration of a solution	1 2	**ICT:** Colloids		
July	5th week 24-28, 31	3		2.2.2Suspension - Properties 2.2.3 Colloids – Properties and examples	2 1	**Periodic Test I: 31/07/2023** **Ch:1** **Matter in our surroundings**	To learn classification of colloids	
August	1st week 1-5	2		2.2.3 Colloids – Properties and examples contd.	2		To prepare a table to show the characteristics of true solutions, Colloids and suspensions.	

August	2nd week 7-12	3		2.3. Physical and Chemical changes	3	A **lab activity** is performed to classify reactions as chemical or physical change		
August	3rd week 14,17-19	2		2.4 Types of pure substances	2		Exercise questions are given as assignment	
August	4th week 21-26	3		2.4.1 Elements 2.4.2 Compounds	2 1	**DEMONSTRATION AND LEARNING BY DOING:** A lab activity is performed to prepare and study the properties of mixture and compounds		**Students will be able to** compare and contrast between Elements and Compounds **SKILLS ASSESSED:** Analytical
August Sept	5th week 28-31 1st week 1-2	1 1		Differentiating compounds and mixtures Flow chart based on Matter (pg 21) Exercise	1 1			**Students will be able to** compare and contrast between Compounds and mixtures **SKILLS ASSESSED:** comparison

Sept	2ndweek 4-8	2	**4.Structure of Atom**	4.1 Charged particles in matter	2	**ICT:** Canal rays **ICT:**Thomson model Rutherfords Model	To practice the diagram of Thomson's model.	Students will be able to Understand about the sub atomic

						Periodic Test II : 04/09/2023 **Ch .2** **Is matter around us pure? (including 2.2.3 What is Colloidal Solution?)**		particles and attempts made by Thomson, Rutherford and Bohr to describe the structure of atom
Sept	3rd week 11-16	2		4.2. Structure of atom	2	**ICT:**Bohr's model	To practice diagram of Bohr's model.	
Sept	4th week 18-21	2		Revision	2		.	

PORTION COMPLETION DATE:18/09/2023

HALF YEARLY EXAMINATION: 26/09/2023 TO 11/10/2023

HALF YEALY EXAMINATION PORTION: THEORY : 25 MARKS

CH:1 MATTER IN OUR SURROUNDINGS (13M)
CH: 2 IS MATTER AROUND US PURE? (12M)

MONTH	WEEKLY DATES	NO. OF PERIODS	NAME OF THE CHAPTERS	TOPICS	NO.OF PERIODS REQUIRED	ACTIVITIES/ SMART CLASS MODULE	ASSIGNMENTS	LEARNING OUTCOMES/SDG/SKILLS ASSESSED
October	2nd week 12-14	1	**4.Structure of Atom**	4.1 Charged particles in matter contd.	1	**EXPERIENTIAL LEARNING:** Act. 4.1 Atom consists of charged particles.	Pg: 39 Intext questions	**Students will be understand** Presence of chargedc sub atomic particles of atom **SKILLS ASSESSED:** Understanding, Observational, Analytical, Scientific temper.
October	3rd week 16-21	2		4.2. Structure of atom contd. 4.2.1 Thomson's model	1 1	**ICT:** Valency	To learn atomic number and distribution of electrons for first 20 elements	**Students will be able to** write electronic configuration and determine the valency for first 18 elements **SKILLS ASSESSED:** Critical thinking, Logical thinking
October	4th and 5th week 25-27,30 & 31	3		4.2.2. Rutherford's model	3	**ICT:** Rutherford's model- Alpha particle scattering experiment.		**Students will be able to** Interpret the conclusion based on the observations. **SKILLS ASSESSED:** Critical thinking, Logical thinking. Testing hypothesis

Novem ber	1st week 1-4	2		4.2.3 Bohr"s model	2	Activity to draw general atomic structure.	**MUTIPLE ASSESSMENT GROUP ACTIVITY: Collage making- Comparativ e study on proposed models of structure of an atom**	**SKILLS ASSESSED:** Concept clarity, Collaborative work, Creativity, Critical thinking, Presentation
Novem ber	2nd week 6-9	2		4.2.4. Neutrons	2		Pg 41 Intext questions	
DIWALI VACATION : 10/11/2023 TO 22/11/2023								
Novem ber	4th week 23-25	1		4.3 Distribution of electrons	1	**ICT:** Distribution of electrons	To draw Bohr's structure of first 18 elements.	**Students will be able to** Know and write electronic configuration of various elements. **SKILLS ASSESSED:** Problem solving, Critical thinking,
Novem ber	5th Week 26-30	1		4.4 valency	1			

Decem ber	1st & 2nd week 1,2, 4-8	3		4.4 valency(co 4.5 Atomic No 4.6 Isotopes a
Decem ber	3rd week 11-16	3	**3. Atoms And Molecules**	Discussion of Answers 3.1 Laws of ch combination
Decem ber	4th week 18-23	3		.3.1.1 Law of mass 3.1.2 Law of c proportion Daltons postu

								SK **AS** Co Re
Decem ber	5th week 26-30	2		3.2 Atom 3.2.1 Symbols of atoms	1 1	**ICT:** Atoms and symbols of atom.	Learn the charges and symbols of ions and radical (Table 3.6)	**Stu** **abl** und the var **SK** **AS** Thi
January	1st week 1-5	2		3.2.2 Atomic Mass 3.3.3 How do atoms exist?	1 1	**ICT:** How do atoms exist?		**Stu** **abl** Un of Ato
January	2nd week 8-13	2		3.3 Molecules 3.3.1Molecules of elements	1 1	**ICT:** Molecules **ICT:** Elements		Mo Ele Co **SK** **AS**
January	3rd week 16-20	2		3.3.2 Molecules of compounds	2	**ICT:** Compounds		Cla An Inf
January	4th week 22-25	2		3.3.3 Molecules of ions	2		Practice table 3.6 –pg 32	

January Februar y	5th week 29-31 1st week 1-3	1 1		3.4 Writing chemical formula 3.4 Writing chemical formula (Contd)	1 1	**DEMONSTRATION:**To demonstrate formation of chemical formula using empty blisters packs of medicines	.	**Stu abl** Wri forr **SK AS** Un App Infe Cre
Februar y	2nd week 5-9	2		3.5 Molecular Mass 3.5.1 Molecular Mass	1 1	**Worksheet:** Formulae of different compounds.	Numericals based on molecular mass calculation will be given	**Stu abl** Ca ma **SK AS** Ca Nu Thi
Februar y	3rd week 12-17	2		3.5.2 Formula Unit Mass Question and Answers Revision of Numericals on Molecular Mass Revision	1 1		Pg: 34 Intext questions are given as assignments	
Februar y	4th week 20-24	2		**Portion Completion Date - 20/02/2023** **Revision for Annual examination**				
Februar y	5th week 26-29			**Non Academic Papers + Revision**				

Annual Examination 2024
02/03/2024 to 15/03/2024

Portion: (Total:25M)

Ch:1	**Matter in our surroundings (5 M)**	**Ch:2**	**Is matter Around us Pure (5M)**
Ch:3	**Atoms and molecules (7M)**	**Ch:4**	**Structure of Atoms (8M)**

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BHAVAN' B.P. VIDYA MANDIR, NAGPUR

SUBJECT : CHEMISTRY

CLASS: IX

SESSION 2023-24

LIST OF LABORATORY EXPERIMENTS

EXP. C1:A) TO DETERMINE THE MELTING POINT OF ICE.

B) TO DETERMINE THE BOILING POINT OF WATER

.

EXP. C2: TO PREPARE :

a) TRUE SOLUTION (SALT & ALUM).
b) SUSPENSION (CHALK &SAND)
c) COLLOIDAL SOLUTION OF STARCH

AND DISTINGUISH ON THE BASIS OF

- TRANSPARENCY
- FILTRATION
- STABILITY

EXP. C3: TO PREPARE

i. MIXTURE
ii. COMPOUND

USING SULPHUR POWDER & IRON FILLINGS. AND DISTINGUISH ON THE BASIS OF

- APPEARANCE (HOMO/HETERO)
- BEHAVIOUR TOWARDS MAGNET
- BEHAVIOUR WITH CS_2 SOLVENT
- EFFECT OF HEAT

EXP. C4:TO CARRY OUT FOLLOWING REACTIONS& CLASSIFY THEM AS PHYSICAL & CHEMICAL CHANGES

a) IRON WITH $CuSO_4$
b) BURNING OF Mg-RIBBON
c) ZINC METAL WITH DIL.H_2SO_4
d) HEATING OF CUSO4 SOLID
e) REACTION BETWEEN Na_2SO_4& $BaCl_2$

EXP. C5: TO VERIFY THE LAW OF CONSERVATION OF MASS.

BHAVAN'S B.P.VIDYA MANDIR, NAGPUR

CURRICULUM PLAN - SESSION: 2023-24

SUBJECT: CHEMISTRY **STD: IX**

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Subject - Enrichment

Bhavan's B.P. Vidya Mandir, Nagpur

Art – Integrated Activity/Project/Subject Enrichment (2023-2024)

Subject: Science (chemistry) Class: IX

Topic: Subject Enrichment

Sub-topic: Science practical (Experiments in Science)

Nature of Task: Individual

Task: Post Content

Skills Assessed: Observation, Analysis, Reasoning, understanding, Drawing

Learning Objectives: (i) To enable the students understand various concepts in science through hands on activities.
(ii) To make the students aware about the experimental set up required for the process.
(iii) To make students realize the principle behind every experiment performed.

Procedure: (1) Teacher will demonstrate the experiment by making the experimental set-up.
(2) She will ask the students to observe the results and note them in their observation book.
(3) Students will perform the experiment, note down the observation, draw diagrams, draw inference and note it down in their practical record.

Assessment Criteria: (1) Understanding
(2) Reasoning
(3) Regularity
(4) Neatness

Duration of the Task: 45 min

Follow up / Feedback: Teacher will take rounds and will guide the students if they face any difficulty in doing the experiment. She will also guide them in writing the procedure, observation and inference if they need any help.

Assessment Rubric:

Regularity	- 02
Completion	- 02
Neatness	- 01
Total	05

Subject Coordinator's: Name and Signature

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ASHTI: Tabassum Ali TMN : Kavita D. (KAVITA DASHASAHASTRA)

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Portfolio (Notebook)

Bhavan's B.P. Vidya Mandir, Nagpur

Art – Integrated Activity/Project/Subject Enrichment (2023-2024)

Subject: Science (chemistry) Class: IX

Topic: Portfolio

Sub-topic: Notebook, Sample of workdone by students.

Nature of Task: Individual

Task: Post content

Skills Assessed: Regularity, Punctuality and neatness.

Learning Objectives: Students will learn to

- Highlight their best work.
- Display their skills and potentials in writing.
- Complete their work on regular basis with neatness and punctuality.
- Determine their learning standard and other requirements for their grades.

Procedure: Students will be asked to

- Write Intext questions, NCERT questions and extra questions in portfolio.
- They will be asked to draw neat and well-labelled diagrams.
- Regular and timely submissions.
- Do the corrections wherever asked.

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Art – Integrated Activity/Project/Subject Enrichment (2023-2024)

Assessment Criteria: Regularity
Punctuality
Neatness

Duration of the Task: Annual

Follow up / Feedback: Teachers will guide the students in case of incorrect answers and improper drawings or labellings.

Assessment Rubric:
Regularity – 02
Punctuality – 02
Neatness – 01
Total 05

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Multiple Assessment

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Art – Integrated Activity/Project/Subject Enrichment (2023-2024)

Subject: chemistry Class: IX

Topic: Structure of an atom

Sub-topic: Comparative study on proposed model of structure of an atom.

Nature of Task: Group activity

Task: Collage Making

Skills Assessed: Collaborative work, creativity, critical thinking

Learning Objectives: To enable the students to compare three models of an atom and to explain how the sub-atomic particles are arranged within an atom.

Procedure: (i) Teacher will explain and guide to the students to make collage on three proposed model of an atom.
(ii) Teacher will further instruct to use a complete chart paper for the same.
(iii) Students can paste pictures of respective scientists along with diagram and written information like postulates, drawbacks, etc. of all the three models.

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Art – Integrated Activity/Project/Subject Enrichment (2023-2024)

Assessment Criteria:
1. content
2. concept clarity
3. creativity
4. Presentation
5. Team work

Duration of the Task: One week

Follow up / Feedback: Teacher will guide the students in case of any doubt.

Assessment Rubric:

1	content	– 01
2	Concept clarity	– 01
3	Creativity	– 01
4	Presentation	– 01
5	Team Work	– 01
	Total	05

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