

ACADEMIC PLAN (SESSION : 2016-17)

CLASS : IX

SUBJECT : SCIENCE

SUMMATIVE ASSESSMENT I

<u>SYLLABUS</u>	<u>NO. OF PERIODS</u>
• Matter in our surroundings	10
• Is matter around us pure	12
• The fundamental unit of life	10
• Tissues	12
• Improvement in food resources	10
• Motion	12
• Force and laws of motion	12
• Gravitation {till floatation}	6

SUMMATIVE ASSESSMENT II

<u>SYLLABUS</u>	<u>NO. OF PERIODS</u>
• Atoms and molecules	12
• Structure of the Atom	10
• Gravitation {floatation}	4
• Work and Energy	10
• Sound	10
• Diversity in living organisms	12
• Why do we fall ill	12
• Natural resources	13

SCHEDULE OF FORMATIVE ASSESSMENT & UNIT TEST

FORMATIVE ASSESSMENT-I	FORMATIVE ASSESSMENT-II	FORMATIVE ASSESSMENT-III	FORMATIVE ASSESSMENT-IV
UNIT TEST (20)	UNIT TEST (20)	UNIT TEST (20)	UNIT TEST (20)
ACTIVITY(10)	ACTIVITY(10)	ACTIVITY(10)	ACTIVITY(10)
ACTIVITY (10)	ACTIVITY (10)	ACTIVITY (10)	ACTIVITY (10)

SYLLABUS FOR UNIT TEST –I

- Motion (till done)
- Matter in our surroundings (till done)

SYLLABUS FOR UNIT TEST -II

- Force and laws of motion (till done)
- The fundamental unit of life

SYLLABUS FOR UNIT TEST -III

- Why do we fall ill (till done)
- Atoms and molecules (till done)

SPECIAL TEST

FULL SYLLABUS- S.A-II

ACTIVITY FOR FORMATIVE ASSESSMENT -I

1. Puzzle grid /crossword puzzle on matter and its states.
2. Draw and describe the graphs of different kinds of motion and derivation of equations of motion.

ACTIVITY FOR FORMATIVE ASSESSMENT -II

1. Assessment of practicals
2. Clay Model of Cell organelles & PPT
3. Project – Separation Techniques used in Industry

ACTIVITY FOR FORMATIVE ASSESSMENT -III

1. Compare and analyse the electricity bills of five houses with respect to number of electrical appliances used and write a slogan on Energy Conservation

OR

Visit to National Science Centre (solving Questionnaire and report submission)

2. Hand Out – Chemical formulae of compounds

ACTIVITY FOR FORMATIVE ASSESSMENT -IV

- Assessment of Practicals
- Project Report on ‘ Conservation of Biodiversity’ (Interdisciplinary)
- MCQ based on practical skills

FORMATIVE ASSESSMENT I

Months	Chapters	Learning Objectives(Students would be able-)	Values Inculcated	Classroom activities	Activities to be assessed	Assignments/ Homework
April-May (20+16)	<ul style="list-style-type: none"> Matter in our surroundings (Oral Test) 	<ol style="list-style-type: none"> To understand the nature of matter. To describe what causes change in state of matter. To relate the process of diffusion and evaporation with daily life activities. 	Scientific temper and lifelong learning	<ul style="list-style-type: none"> Class discussion on fourth state of matter – Plasma 	<ul style="list-style-type: none"> Puzzle grid /crossword puzzle on matter and its states. 	1+2
	<ul style="list-style-type: none"> The fundamental unit of life (Class Test) Written 	<ol style="list-style-type: none"> To compare and contrast the different types of cells. To review the structure of different cell organelles and explain the co-ordination of their functions. 	Self awareness, lifelong learning	<ul style="list-style-type: none"> Discussion and demonstration of osmosis using potato osmoscope 		1+2
	<ul style="list-style-type: none"> Motion (Written Test) 	<ol style="list-style-type: none"> To understand graphical representation of motion. To derive the equations of motion. To estimate the rate of change of velocity. 	Work ethics, rational thinking, creativity	<ul style="list-style-type: none"> Graphs of different kinds of motion 	<ul style="list-style-type: none"> Draw and describe the graphs of different kinds of motion and derivation of equations of motion. 	1+2

FORMATIVE ASSESSMENT II

Months	Chapters	Learning Objectives (Students would be able -)	Values Inculcated	Classroom activities	Activities to be assessed	Assignments/ Homework
July - Aug (21+22)	<ul style="list-style-type: none"> Is matter around us pure (Written Test) 	<ol style="list-style-type: none"> To differentiate between different types of mixtures. To learn various techniques of separation of mixtures and their application in everyday life. 	Learning by doing, work ethics	<ul style="list-style-type: none"> Discussion on uses of colloids 	FA2 <ul style="list-style-type: none"> Assessment of practicals MCQ based on practical skills 	1+2
	<ul style="list-style-type: none"> Tissues (Oral Test) 	<ol style="list-style-type: none"> To compare and contrast the different types of plant and animal tissues. To detail the functions carried out by different tissues 	Self awareness, life long learning	<ul style="list-style-type: none"> Comparison of different types of tissues 	<ul style="list-style-type: none"> Clay Model of cell organelles & PPT 	1+2
	<ul style="list-style-type: none"> Improvement in food resources (Written Test) 	<ol style="list-style-type: none"> To learn various types of food resources and methods of their improvement. To discuss about animal husbandary w.r.t. cattle, poultry and fish farming. 	Care and compassion for all life forms	<ul style="list-style-type: none"> Discussion on – importance of organic farming 	<ul style="list-style-type: none"> Project on Separation Techniques used in Industry. 	1+2
	<ul style="list-style-type: none"> Force and laws of motion (Written Test) 	<ol style="list-style-type: none"> To state the various laws of motion. To solve the numerical problems based on force and laws of motion. To apply laws on real life situations. 	Scientific temper, learning by doing	<ul style="list-style-type: none"> Group discussion on laws of conservation of momentum 		1+2
	<ul style="list-style-type: none"> Gravitation {till floatation} (Oral Test) 	<ol style="list-style-type: none"> To understand and apply the Archimede's principle. 	Scientific temper, learning by doing.	<ul style="list-style-type: none"> Numericals based on gravitation 		1+2
Sept (5 days)	REVISION-SA-I					

FORMATIVE ASSESSMENT III

Months	Chapters	Learning Objectives (Students would be able-)	Values Inculcated	Classroom activities	Activities to be assessed	Assignments/ Homework
Oct-Nov (17+21)	<ul style="list-style-type: none"> Atoms and molecules (Written Test) 	1.To state laws of chemical combinations. 2. To write chemical formulae of compounds. 3.To determine the molecular mass of chemical compounds.	Rational thinking, scientific temper	<ul style="list-style-type: none"> Numericals on Mole concept Practice of writing chemical formulae of compounds 	<ul style="list-style-type: none"> Handout on Chemical formulae 	1+2
	<ul style="list-style-type: none"> Gravitation (floatation} (Oral Test) 	1. To understand the concept of thrust, pressure and floatation.	Work ethics		<ul style="list-style-type: none"> Compare and analyse the electricity bills of five houses with respect to number of electrical appliances used and write a slogan on Energy Conservation 	1+2
	<ul style="list-style-type: none"> Work and energy (Written Test) 	1. To understand the concept of work done and energy.. 2. To enumerate various forms of energy and energy transformations.	Self awareness, value of time, work ethics	<ul style="list-style-type: none"> Class discussion on “Sun is the ultimate source of energy ” 	<ul style="list-style-type: none"> OR Visit to National Science Centre (solving Questionnaire and report submission) 	1+2
	<ul style="list-style-type: none"> Why do we fall ill (Oral Test) 	1..To discuss the essential conditions of good health. 2. To understand various communicable diseases, their symptoms and preventive methods.	Good hygiene, social justice and equity	<ul style="list-style-type: none"> Discussion on causes and prevention of communicable diseases. 		1+2
	<ul style="list-style-type: none"> Natural resources (Written Test) 	1. To explain the sources and effects of air, water and soil pollution. 2. To represent biogeochemical cycles diagrammatically. 3.To relate the effect of green house gases to ozone depletion and global warming.	Conservation of natural resources, righteous conduct	<ul style="list-style-type: none"> Practice of drawing various bio geochemical cycles. 		1+2

FORMATIVE ASSESSMENT IV

Months	Chapters	Learning Objectives (Students would be able-)	Values Inculcated	Classroom activities	Activities to be assessed	Assignments/ Homework
Dec -Jan (22+07)	<ul style="list-style-type: none"> Structure of Atom (Written Test) 	1. To describe the different models of atom. 2. To distribute the electrons in different orbits. 3. To distinguish between atomic no., mass no.; isotopes and isobars.	Self awareness, Scientific temper	<ul style="list-style-type: none"> Practice of drawing atomic models of different elements 	<ul style="list-style-type: none"> Assessment of Practicals 	1+ 2
	<ul style="list-style-type: none"> Sound (Written Test) 	1. To understand production and propagation of sound. 2. To familiarize with terms associated with sound and to understand echo. 3. To distinguish between longitudinal and transverse waves.	Scientific temper, rational thinking	<ul style="list-style-type: none"> M.C.Q. based on practical 	<ul style="list-style-type: none"> MCQ based on Practical Skills 	1+2
	<ul style="list-style-type: none"> Diversity in living organisms (Written Test) 	1. To list and describe the characteristics of living organisms. 2. To compare and contrast the characters of different groups. 3. To explain the evolutionary relationship between different groups.	Care and compassion for all life forms, respect and love for all		<ul style="list-style-type: none"> Project Report on 'Conservation of Biodiversity' (Interdisciplinary) 	1+2

- Separate notebooks for class work and homework {physics, chemistry and biology} to be maintained .
- Practical files to be maintained and assessed by the teacher.

➤ **Measures to enhance performance of bright students-**

- HOTS questions
- Application and skill based questions
- Problem solving questions / situational questions

➤ **Remedial measures for below average students-**

- Objective type questions
- Very short answer type questions