S.No.	TOPIC	Class	Date	Page No.
1	Matter around us (Diffusion of two gases)	IX		1 – 8
2	Matter around us (Shell properties of matter)	IX		9 – 15
3	Matter around us (Space between us)	IX		16 – 22
4	Matter around us (effect of temperature)	IX		23 – 28
5	Motion (force of attraction)	IX		29 – 35
6	Matter around us (evaporation)	IX		36 – 42
7	Matter around us	IX		43 – 47
8	Matter around us	IX		48 – 52
9	Motion (Average speed)	IX		53 – 56
10	Motion (Average velocity)	IX		57 – 61
11	Motion (instantaneous speed)	IX		62 – 65
12	Motion (distance time graph)	IX		66 – 70
13	Matter around us (matter properties)	IX		71 – 75
19	Air, Winds and cyclone	IX		75 – 79
15	Earthquake	IX		80 – 88
16	Air and its construction	IX		89 – 93
17	Parallel circuit	IX		94 – 100
18	Types of mixture	IX		101 – 107
19	Rates of reaction	IX		108 – 113
20	Matter around us	IX		114 – 120

Internship Lesson plan – 1.

Priliminary Information

Name of the student teacher : Sujoy Barman

Roll no :

class : IX

Subject : 1- Physical Science

Name of the unit : 1- matter around us

Name of the lesson : Diffusion of two gases.

Date :

Period : 1 – 04

time : 45 mins.

Name of the school :

Poevious knowledge assumed: The pupil has the poevious knowledge of matter.

Teaching points: 1. Properties of solid, liquid and gas.

2. Identifying the shape and volume of solids, liquids and gases.

Teaching method: 1. Lecture cum demonestration method.

Teaching learning material: charts, chalipiles, duster, stone, cloth etc.

Reference books for

content: 1. VIII class A.P Govt. Physical science text book,

2. X class A.P Govt. Physical Science text book.

Major instructional objectives and specification.

Knowledge: Pupil aquire the knowledge of concepts a terms in the lesson diffusion of gases.

Recall : Pupil recall the terms, concepts in the lesson diffusion of gases.

Reognise: Pupil reognises the term, concepts in the lesson on diffusion of gases.

Understanding: Pupil develop an understanding of ~~the~~ knowledge of the terms concepts in the lesson diffusion of two gases.

Gives reasons: Pupil give example for the situation in the lesson of diffusion of gases.

Explains : Pupil explains different types of processes in the lesson diffusion of two gases.

clarifict : clarifies different types of objects, substances in the lesson diffusion of gases.

Implication: The pupil develops knowledge and understanding in familiar situation.

Specification: The pupil.

Analysis : Analysis the concepts in lesson diffusion of two gases.

formulates Hypothesis: The people formulates different hypothesis for the phenomenon in lesson diffusion of two gases.

Verifies : Verifies the above hypothesis in the lesson diffusion of two gases.

Predicts : Predicts appropriate reason for the lesson diffusion of two gases.

Skill : The pupil acquire skills in observation - manipulation drawing and reporting.

drawing skill: draw the diagram neatly and correctly in physical science.

Observation skill: Read aparatus carefully.
Read the observation carefully.

Content-analysis	Teacher's activity	Pupils' activity	B.B.W
Testing the previous knowledge of the student.	To test previous knowledge of the students. I asked the following questions. ① In how many states matter exists? ② what are They - ③ In which type of substances get-high compressibility ? ④ what we call the diffusion which takes place in solids ?. ⑤ In solid and liquid diffusion first take place in _	① three ② solid, liquid and gas. ③ gas particles. ④ solid diffusion. ⑤ diffusion in gases.	

Announcement of the topic — Diffusion between two gases.

Content-analysis	Objective	teacher's activity	Pupils' activity	TLM	BB W	Evaluation
difference between solid and gases		By showing a glass test-tube → what is this → how are inside → what is this → what r are I doing → what is the formula of ammonia solution → what are I doing → what is this → what is the formula of Hydrochloric acid ?	→ glass test tube → two sides open → cotton → dip the cotton in NH_3. → NH_3 → placing the cotton of NH_3 sol^n in one end of the test tube. → cotton of NH_3 → HCl.	test tube → NH_3	test tube → NH_3.	

→ what am I doing	placing the cotton of the dil HCl.
→ now what I am doing	test tube blocking the ends of the tube.
→ what do you observe on blocking	the hydrochloric gas and NH_3 gas both mix with each other.
→ what do you observe in the test tube	A white substance.
→ do you know what is this called	→ this is Ammonium chloride.

CUMULATIVE ACTIVITIES.

Summarisation: To day we learn how diffusion takes place between two gases.

Recaptulation:
1. what is meant by diffusion of gases.
2. How does diffusion takes place between two gases.

Home assignment: How diffusion takes place between two gases explain vitaon activity.

Internship lesson plan - 2.

Name of the student teacher : Sujoy Barman

Subject : 1. Physical Science.

class : IX.

Date :

Unit : Matter around us.

lesson : what is matter made up of and how shall particles of matter.

period : 1 - 05.

Name of the school :

Pervious knowledge assumed : Pupil acquire the knowledge on properties of matter compressibility diffusing particles.

Teaching point: what is matter made up of ? how small the particles of matter.

Teaching method : lecture cum demonestration

Teaching learning material : Charts, blue, salts, glass tube etc.

Reference books : A.P Govt. text book of physical Science of VIII

A.P Govt. text book of physical Science for IX.

For methodology, Method of teaching of Physical Science (Neel Kamal)

Minor instructional objectives and specification

Knowledge :- The pupil acquire the knowledge of concepts of lessons, terms definition in lesson with which matter is made up of and how small of particles of matter.

Recall : The pupil recall diff... terms, concepts in the lesson with which matter is made up of and how small are particles of matter.

Recognise: Pupil recognise the above diffusion term, concepts in the lesson with which matter is made up of and how small are particles of matter.

Application: The pupil applies his knowledge and understanding in the lesson.

Analysis : The pupil analyse the concepts procedure in the lesson.

Predict : Predicts appropriate lesson.

Skill : The pupil acquire the skill in observation, drawing skill in lesson.

drawing skill: draw the diagram neatly and correctly.

Interest: The pupil develops an interest in Scientific phenomenon in the lesson participates in debates and talks on relevant topics. Write the article pertaining to subject for school magazine.

Scientific attitude: The pupil develop scientific attitude. Co-operate with others in arranging apparatus at the time of experiment.

Develop scientific attitude; characterisation, like impartiality of the truth, honest etc.

INTRODUCTORY ACTIVITIES.

Content analysis	Teacher's activity	Pupils' activity	BBW
Testing the previous knowledge of the student.	→ By showing duster what is this ?	duster	
	→ This is which kind of substance ?	solid	
	→ what we take to live ?	Air	
	→ This is which kind of substance ?	Gas particles.	
	→ do you know how these matter made up of.	materials made up of tiny particles.	
	→ do you know how small the particles can be		

Announcement of the topic 'today we are going to learn how small the particles of matter.

DEVELOPMENTAL ACTIVITIES.

Content analysis	Objectives	teacher's activity	Pupils' activity	BBW	TCW	Evaluation
Show small particles of matter.		By showing glass what is this. (by pouring water in the glass) what I am doing ? By drawing the level of the water in beaker. ? what I am doing ? what is this what is the crystal ? Is there any colour change in water. what change	beaker Pouring water in the glass. Measuring up to the level of water. Pink coloured crystals. Potassium permagnet. Yes. the colour of water changes. It changes into pink colour.	beaker	beaker	

Now what am I doing and what am I mixing to that solution.

Again what I am doing do like this upto 5 times

what do you observe to the colour of this solution in the water. still colour.

How is it possible. These are several thing particles in just one. crystals of pottasium permagnet which are uniformly distributed in large quantity of charge its water. from this what we conclude.

taking out one local ell to this solution.

90 ml of water. taking out of 10 ml of solution and add 90 ml of water.

Yes.

CUMULATIVE ACTIVITIES.

Summarisation: Today we learnt about the pupil how small as matter particle of matter made.

Recaptulation:

1. with which the substance made.
2. what is the colour of the solution in the beaker.

Home assignment :

Explain how small is the particles of matter made.

INTERNSHIP LESSON PLAN – 3.

Name of the student teacher: Sujoy Barman

Subject : Physical Science

class : IX.

Date :

Unit : matter around us

Lesson : There exists space between us.

Period : 04

Name of the school :

Previous knowledge assumed: Pupil has the knowledge of particles space between particles.

Teaching point: force of attraction between the particles of matter.

Teaching method: Lecture cum demonestration,

Reference books: 1. A.P Govt. text book of P.Sc (VIII)

2. A.P Govt. text book of P.Sc (IX).

Major instructional objectives and specification.

Knowledge: The pupil acquires the knowledge of concept term in the lesson force of attraction, between the particles of matter.

Recall: The pupil recall the term dif. in the lesson force of attraction between particles,

Understanding: The pupil develops an understanding of knowledge of term definition in the lesson force of attraction between particles of matter.

Give reason: The pupil give reason for the situation method in the force of attraction between particles of matter,

Composes: The pupil composes the method in the lesson force of attraction between particles,

Skill: The pupil acquires the skill in observation drawing in the lesson,

Observation skill: The pupil develops his observation skill read the apparatus takes the observation clearly.

Interest: The pupil develops or interest in scientific phenomenon in the lesson, participation in debates and talles in relevant topics. Collective related hobbies like group school, science, club.

Scientific attitude: The pupil develop scientific attitude.

(a) choose the demonestration perform. Physical Science apparatus.

(b) develops scientific attitude contribution, characteristics like compatibility, honest etc.

INTRODUCTORY ACTIVITY

Content analysis	Teacher's activity	Pupils' activity	BBW
Testing of previous knowledge	to test the previous knowledge of the students I asked the questions –		
	→ in how many states the matter may exist	three	
	→ what are they	solid, liquid and gas.	
	→ with which the matter made of	Particles.	
	→ is space exist between particles	Yes.	
	→ There is force of ~~action~~ attraction between the particles of matter.	Yes.	

Announcement of topic.

Content analysis	Objectives	teacher's activity	Pupils' activity	BBW	TLM	Evaluation
force of attraction on particles of matter		by opening water tap → what I am doing → Can you break the stream permanently → Are you able to break the stream anywhere from the tap → so, water is which type of substance	Opening the tap No No. liquid.	Tap		

water remains together

→ it is force of attraction between the particles of matter.

→ what is this

→ what am I doing

→ none what I am doing

Unable to do that does of anyone

None what is this

what am I doing

can we join the piece

why we can not join the piece because there is a force of attraction between the particles of matter.

Iron nail.

pressing the iron of wall

blocking the piece of nail by hand

No

No

Chalk piece.

break the chalk piece

No

Pupil explain the force of attraction.

Force of attraction between the particles of matter.

Cumulative Activity.

Summarrisation: Today we learn about the topic " force of attraction between the particles of matter.

Recaptulation: 1. The force of attraction between the particle is seen all the matter.

2. When you break the chalk piece it is possible to join.

Home assignment: Force of attraction between the particles of matter.

Internship lesson plan – 04.

Name of the student teacher: Sujoy Barman

Subject : Physical science

class : IX.

Date :

Period : 02

Unit : matter around us.

Lesson : effect of temperature.

Name of the School :

Previous knowledge: Pupil has the previous knowledge of the force of attraction between particles of matter.

method: teaching cum demonestration method.

teaching aid: charts, breaker, thermometer, ruler board, pointer etc.

Reference books: A.P Govt. text books of Physical Science for IX and VIII

methodology: methods of teaching Physical Science (Neel kamal and Telegu academy)

Major instructional objectives and specification.

Knowledge: The pupil acquires the definition, term, concepts, in the lesson effect of temperature.

Recall: The pupil recall the definition, term, concepts, in the lesson of effect of temperature.

Recognise: The pupil recognise the definitions term etc.

Understanding: The pupil develops an understanding of knowledge of term definition in the lesson effect of temperature.

Explain: The pupil explain the different type of process in lesson effect of temperature.

Describes: The pupil describes the description method in lesson effect of temperature.

Reporting skill: Report the result with correcte units.

Interest: The pupil develops an interest in scientific phenomenon in lesson effect of temperature.

Participation in debates: and talks on relevant topics.

Scientific attitude: The pupil develop scientific attitude.

(a) co-operate with others, in arraging opportunity.

(b) develops scientific attitudes, characteristics in partiality of the truth, honest, etc.

K. Ravikumar
HEAD MASTER
Trinity (E.M) High School
DARSI - 523247. Prakasam Dt.

INTRODUCTORY ACTIVITY

Content analysis	Teacher's activity	Pupil's activity	BBW
Testing previous knowledge	→ how many states of matter exist	→ 3	
	→ what are they	→ Solid, liquid and gas.	
	→ Coconut oil is generally in which state	→ liquid.	
	→ In winter season what is the state of coconut oil.	→ Solid.	
	→ When camphor is disabled to air what happens ?	vapour.	

Announcement of the topic.

Content-analysis	Objectives	Teacher's activity	Pupils' activity	BBW	TLM	Evaluation.
		→ What is this	beaker			
		→ Now what I am adding in this	ice	beaker	beaker	
		→ where I am keeping	in contact to ice	ice		
		→ what is this	laboratory Thermometre	Thermometre	Thermo-metre.	
		→ what I am doing	notice the temp. change			
		→ now what I am doing	heating the beaker			
		→ is the reading of thermometre changes	Yes.			
		→ Record the reading	Pupil noted.			

CUMULATIVE ACTIVITY

Summerrisation; Today we learn the topic effect of temp. on change.

Recaptulation; 1) what is fusion 2) what happen to the temp. 3) after ice melts 3) what is boiling point of H_2O.

Home assignment; Explain how the effect of temp. change state of substance.

Internship lesson plan - 05.

Name of the student teacher : Sujoy Barman

Subject : Physical Science

Class : IX.

Date :

Period : 04

Unit : Motion

Lesson : force of attraction.

Name of the school :

Previous knowledge: The pupil has the previous knowledge about the effect of temp. on change of its state.

Teaching point: Effect of change pressure.

Teaching method: Lecture cum demonestration method.

Material : Charts.

Reference books: A.P Govt. text books of Physical Science for IX and VIII.

Major instructional objectives and specification.

Knowledge: The pupil acquired of term definition, concept in the lesson effect of change of temperature.

Recall: The pupil recalls the term, definition in the lesson effect of change of temperature.

Recognise: The pupil recognise the term, definition etc.

Analysis: The pupil analysis the concept, phenomenon in the lesson plan effect of pressure.

Give Reasons: The pupil give reasons for the situation in the lesson effect of change of pressure.

Verifications: The pupil verifies the above hypothesis in the lesson.

Skill: The pupil acquires the skill for phenomenon, reporting skill in the lesson effect of change of temp.

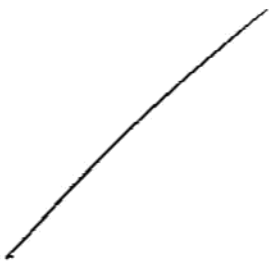
Observation skill: The pupils develop observation skill.

Appreciation: The pupil appreciate the contribution of scientific phenomenon in the life. Through the lesson "Effect of pressure".

Recognise the contribution to scientist to science.

Interest: The pupil develop interest in scintific phenomenon in the world of Physical Science participates in debates and talks on relevant topics.

Scintific attitude: The pupil develop scientific attitude.



Announcement of topic.

Content analysis	Teacher's activity	Pupils' activity	BBW/TLM
Testing of previous knowledge	→ how many states are there	3	
	→ what are they	Solid, liquid and gas.	
	→ Can we compress a solid	No.	
	→ Can we compress liquid	Yes.	
	→ Can we compress gas	Yes.	
	→ which one is easy to compress	gas.	

Announcement of topic.

Content-analysis	Objective	Teacher's activity	Pupils' activity	BBW	TLM	Evaluation
Effect of change on Pressure	recall →	→ in our home to cook food which gas is used	LPG			
		→ The gas is liquified by applying pressure or temperature	Pressure.			
	Recognise	→ when by apply pressure on solid CO_2 the CO_2 is directly changes to gas on state when the pressure decreases to Leiter.	Solid high pressure.			

	that's why the solid CO_2 is called dry ice → so the state of substance indirectly changed to another state by decreasing pressure. → no temperature or pressure deteriates the states whether they may be solids, gases or liquids. → Give some observation day to day life.	Pupil gave some example.			

CUMULATIVE ACTIVITY

Summarisation: Today we learn about the topic effect of change of pressure.

Recapitulation:

1) what is dry ice.
2) what happen when we decrease the pressure or temperature.

Home assignment:

What is effect of change of pressure. Explain.

Internship lesson plan – 06.

Name of the student teacher: Sujoy Barman

Subject: Physical Science

class: IX

Date:

Period: 05

Unit: Matter around us

Lesson: evaporation

School:

Previous knowledge: Pupil has the previous knowledge of states of matter effect of temperature and pressure.

Teaching point: Evaporation.

method: Lecture cum demonstration

Materials: Charts, Roler board, pointer etc.

Reference books: A. P Govt. text books of Physical Science for VIII and IX.

(20)

CUMULATIVE ACTIVITIES.

Summarisation: Today we learn about the topic 'matter' states and its property.

Recapitulation:

(i) how is the shape of volume of solids.

(ii) why the shape of liquid is not definite.

(iii) what is liquid?

Home assignment:

Lesson plan – 06.

Name of the student teacher: Sujoy Barman
Subject: Physical Science.
class: IX
Date:
Period: 05
time: 45mins.
Unit: matter around us
Lesson: evaporation.
School:

Previous Knowledge: Pupil has the previous knowledge of states of matter effect of temperature and pressure.

Teaching point: evaporation.
Method: Lecture cum demonstration.
Materials: charts, pointer, roler board etc.
Reference books: A.P board. text book of Pride for IX and X.

Major instructional objectives and specification.

Knowledge: The pupil acquires the knowledge of term, definition, concept in the lesson matter, states of matter, properties of solids, liquid and gases etc.

Specification:

Concept: Matter exist in three states solids, liquids and gas. Properties of solid, liquid and gas.

Recognises: Pupil recognise the above definitions, concepts, term, understand situations.

Understanding: The pupil develops an understanding of knowledge of the definition, concept etc.

Explains: The pupil explains the above concept, def term, in the Lesson matter.

Introductory activities.

content analysis	Teacher's activity	Pupils' activity	TLM and BBW
Testing the previous knowledge of the student	→ what is this	chalk	chalk piece.
	→ it is soft or hard	softer	
	→ what is this	duster	duster.
	→ is it a softer or harder	softer.	
	→ what is this	Stone	stone.
	→ is it a softer or harder	harder.	stone.
	→ what is the difference between them	the substance with which they made up of.	
	→ what is this	bottle	bottle.
	→ what is this	cloth	cloth.

Announcement of the topic.

content-analysis	Teacher's objective	Pupils' activity	B.BW	TLM	Evaluation.
Evaporation is the phenomenon is the change of state from liquid into gas.	→ in our home we see drying wet clothes in air	Yes.			
	→ here the clothes dry. with out reaching its b.p	Yes.			
	→ when we keeps naphthalene balls in air what happens.	evaporates.			
	→ when we keep camphor in air what happen	evaporates.			
	→ what are reasons behind this evaporation.				

Consolidative activity.

Summarisation: Today we learnt about the topic evaporation.

Recapitulation: Give some example which change directly liquid to vapour what is evaporation.

Home assignment: Explain about evaporation.

Lesson Plan – 07.

Name of the student teacher: Sujoy Barman

Subject: Physical Science.

class: IX

Period: 04

Unit: Matter around us.

school:

Date:

Previous knowledge: Pupil has the previous knowledge about states of matter effect of temperature, pressure and evaporation.

Teaching point: Effect of surface area, humidity.

Method: Lecture cum demonstration method.

Materials: Charts, pointer, duster, roller board etc.

Reference books: A.P Board. books of Prose for XIII and IX.

Major instructional objectives.

knowledge: The pupil acquires the knowledge of concept of terms definition in the lesson effect of surface area, humidity wind..

Recall: The pupil recalls the term definition in lesson effect of surface, area, humidity and wind speed.

Recognise: Pupils recognise the term, definition etc,

Understanding: Pupil develops an understanding of knowledge of term definition,

Verifies: Pupil classifies different type of substances in the lesson effect of surface area and humidity

Proves: Pupil. proves the concept, experiment in the lesson.

Application: Pupil applies his knowledge.

(22)

Announcement of the topic.

Content	Objective	Teacher's activity	Pupils' activity	BBW	TLM	Evaluation
		→ to measure the speed of car which instru-ment is used.	Spedometere.			
		→ is there any change in speed of car travelling in mululity	Yes			
		→ How can be calculate the instantaneous speed of the body at a certain point	Calculate.			
						V. Recikcd

Content	Objective	Teacher's activity	Pupil's activity	TLM	BBW	Evaluation
Testing the previous knowledge		→ what is average speed → units of avg. speed. → what you are travelling in how can we locate the speed of the car. → is there any change in the speed of the object which is in motion.	the distance covered by object act on unit time m/s. Speedometer. Yes.			

Cumulative activity.

Summarrisation: Today we learnt about the motoin.

Recaptulaition: ① what is motoin

② motion is combined properly of what- according to the observer.

Home assignment: Observe the object which are in motion. arroumd your sourrounding.

Lesson Plan- 09

Name of the student teacher: Sujoy Barman.

Subject : Physical Science

class : IX

Date :

Unit : Motion.

Lesson : Average speed.

Period : 03

School :

Previous knowledge: Pupil has the previous knowledge of length, displacement.

Material: chart, Pointer, roter board etc.

Teaching point: Average speed.

Method: Lecture cum demonestration.

Reference books: A. P Ganguli, text- books for IX and X.

Major instructional objectives and specification.

Knowledge: Pupils acquire the knowledge of terms, definitions, concepts.

Recall: Pupil recalls the term, definition, concept in this lesson.

Recognise: Pupil recognise the term, definition, objects.

Understanding: Pupil develops an understanding.

Explain: The pupil explain different type of method.

Proves: Pupil proves the working concept.

Application: The pupil applies his knowledge and understanding

Analysis: Pupil analysis the concept.

verifies: Pupil verifies the above hypothesis.

Content-analysis	Objective	Teacher's activity	Pupils' activity	BBW	TLM	Evaluation
Testing of previous knowledge		→ what is distance	distance is the length of the path travelled by an object in a given time interval.			
		→ what are the units of distance	meter.			
		→ what is the unit of time.	second.			
		→ do you travel guntur to Vijayawada by bus.	Yes.			

(27)

Content analysis	Objective	Teacher's activity	Pupils' activity	BBW	TLM	Evaluation
Average speed.		A train named Godavari express starts at 5.0pm from Vishakhapatnam and reached Hyderbad at 5.00 am the next day. → what is starting point → what is ending point. → what is total time taken for journey → total distance travelled → distance covered in each hours. → how do you find it.	Vishakhapatnam Hyderbad. 12 hrs. 720 km. 720/12 = 60 km/h. Avg. speed = total distance / time taken			

CUMULATIVE ACTIVITY

Summarisation: Today we learnt about the topic avg. speed.

Recapitulation:
① what is avg. speed.
② what are the units.

Home assignment: what is avg. speed, formula, and write its unit.
If a person travell a distance at st. line then what-
is the avg. speed of the person.

Lesson Plan — 10.

Name of the student-teacher: Sujoy Barman

Subject: Physical Science.
Class: IX
Unit: motion.
Lesson: Avg. velocity
Date:
Period: 05
School:

Previous knowledge: Pupil has the previous knowledge of the distance displacements and its units.

Teaching point: Avg. velocity.

Teaching method: Lecture cum demonstration.

Teaching Learning material: flannel board, Ruler board, pointer etc.

Reference books: A.P Bhatt. text book of P.Sc for VIII and IX.

Major instructional objectives.

Knowledge: The pupil acquire the knowledge of terms, definition etc.

Recall: The pupil recalls the term, definition, concepts in the lesson.

Recognise: The pupil recognise different term.

Understanding: The pupil develops on understanding of knowledge.

Explain: The pupil explains different types of method in the lesson.

Compares: The pupil compares methods, processes in the lesson.

Express units: The pupil express appropriate units for the concepts variables i.e result in the lesson.

Content-analysis	Objective	Teacher's activity	Pupils activity	BBW	TLM	Evaluation
Avg-velocity The displacement of an object per unit time is average velocity		→ Observe the route of Godavari express. → what is displacement of train in each hour. → what is the time taken by train to travel. → what is displacement of train → at a particular time a object get's displacement.	Observed. 360 km 12 hr. 360/12 = 60 km/hr. Yes.			

Cumulative Activity.

Summarisation:

Today we learnt about the avg. velocity.

Recapitulation:

① what is avg. velocity?
② what are avg. velocity?
③ is avg. velocity is scalar/vector.

Home assignment: what is avg. velocity and unit?

Lesson Plan - 11

Name of the student teacher: Sujoy Barman.

Subject: Physical Science

class: IX.

Period: 05

Unit: motion.

Lesson: instantaneous speed.

School:

Previous knowledge: Pupil has the previous knowledge about displacement, avg. speed, avg. velocity.

Teaching point: instantaneous speed at particular point.

Teaching method: Lecture cum demonestration.

Teaching Learning material: chart, pointer, white board, duster etc.

Reference books: A.P Govt. text books for IX and X.

Major instructional objectives.

Knowledge: The pupil acquires the knowledge of term, definition, concepts.

Recalls: The pupil recalls the def., term, concepts. etc.

Recognise: The pupil recognises the above term, definition, concepts.

Understanding: The pupil applies his understanding of knowledge of terms in the lesson.

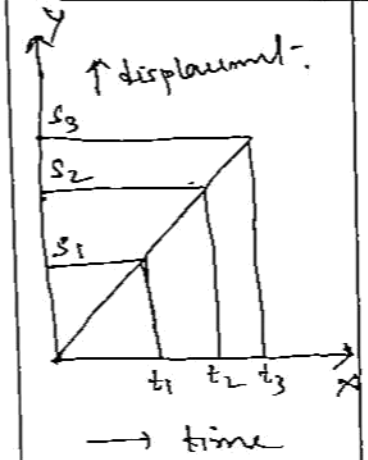
Explain: The pupil explains different types of method.

Describe: The pupil describe procedure in the lesson.

Proves: The pupil proves the procedure in the lesson.

Application: The pupil applies his knowledge and understanding.

(31)

Content analysis	Objectives	Teacher's activity	Pupils' activity	BBW	Evaluation
		→ what we take on X axis	time		
		→ what we take on Y axis	distance		
		→ what is the avg. speed between t_1 and t_2	avg. speed = $\frac{S_2 - S_1}{T_2 - T_1}$		
		→ Units of avg. speed.	m/s.		
		→ The lesson in the graph passes through which point	t_1 and t_2		
		The slope gives — of the content that instant.	speed.		
		→ T.. the time decrease then the value.			
				K. Ravikumar	

		avg: speed decrease at particular point-	Yes.		
		we can find the slope of the curve at any point on it by drawing	tangent.		
		→ which is the slope of this tangent-	Avg. speed.		
		→ what is the point of avg. speed	t_3		
		→ the speed at t_3 is called	instantaneous speed.		
		→ If slope is increased then speed	increase.		
		If slope decrease	decrease.		

Cumulative activity.

Summarisation: Today we learnt about the topic instantaneous speed.

Recapitulation: what is instantaneous speed.
what are the units of instantaneous speed.

Home assignment: Explain what is instantaneous speed.

Lesson Plan - 12

Name of the student teacher: Sujoy Barman
Subject: Physical Science.
class: IX.
Date:
Period: 05
Unit: Motion
Lesson: distance time graph.

Previous knowledge: The pupils acquire the previous knowledge of instantaneous speed.

Teaching point; distance time graph, velocity graph.

Teaching method; Lecture cum demonestration,

Material: Velocity, charts, and distance, time approch.

Reference books: A.P Bord. text books for IX and VIII.

Major instructional Objectives.

knowledge: The pupil acquires the knowledge of the terms, concepts in the lesson motion.

Recall: The pupil recall the term, definition, concepts in the lesson motion.

Recognise. The pupil recognise the above term.

Understanding: The pupil develops their understanding.

Explain: The pupil explain different type of processes.

Verifies: The pupil verifies the above knowledge.

Proves: The pupil proves the working procedure.

Content analysis	Objective	Teacher's activity	Pupils' activity	TLM	BBW	Evaluation
Motion.	Recall	by showing two person A and B the black head in which side to the person A.	Right-			
		by showing the person B the head is which side to this person.	left.			
		Now it is morning / evening	Morning			
		In the same way now in America evening / morning	evening.			

→ in which side A is	up.
→ in which side B is	down.
→ to air is which side	downwards
→ to A, B which side	downwards
→ from the observation of day and night and left up and down sum like what-	observation.
→ all these term relative or not	Yes.
→ so, we can always say motion is relative	Yes.

cumulative activity.

Summarisation: Today we learnt about the topic distance time velocity graph.

Recapitulation:
① How we find the instantaneous speed.
② The instantaneous speed and slope of the tangent is inversely proportional.
is right / wrong.

Home assignment: Explain the graph between distance time velocity.

Lesson Plan - 13

Name of the student

teacher: Sujoy Barmen
subject: Physical Science
Roll no:
class: IX
time: 45 mins.
topic: Matter around us
Subtopic: matter properties.
Date:
Period: 04
School:

Previous knowledge: The pupil has the previous knowledge of materials.

Teaching points: ① Properties solids, liquids, gases,
② identifying the shape and volume of solids, liquids and gases.

Teaching methods: Lecture cum demonestration,

Material: Charts, Pointer, stone cloth etc.

Reference books: A.P Bhatt. text book of Physical Science for IX.

Instructional Objective.

Knowledge: The pupil acquires, the knowledge of concepts, definitions.

Recall: The pupil recall the definition, term, concepts in the lesson.

Recognise: The pupil recognise the definition, term, concepts in the lesson.

Application: The pupil applies his knowledge and understanding.

Give reason: The pupil give reason for the situation phenomenon in the lesson.

Generation: The pupil generates the situation in Physical Science lesson.

Skill: The pupil acquires the skill in observation and reporting skill in the lesson.

Introductory activity

Content analysis	Objective	Teacher's activity	Pupils' activity	TLM	BBW	Evaluation
Testing the previous Knowledge		→ How many states of matter exists.	3			
		→ what are They	Solid, liquid and gas.			
		→ do we always need heat to change the state.	Yes.			
		→ Can we change the state from liquid to vap. without reaching the liquid it b.p	No.			

Announcement of the topic

content-analysis	Objective	Teacher's activity	Pupil's activity	TLM	BBW	Evaluation
state of matter.		what is this	Stone.			
		In which state is this?	Solids.			
		what is this?	ice			
		In which state is this?	Solid.			
		After sometime what happens to ice?	it melts and changes into water.			
		Now it is in which state!	liquid.			
		On heating water what do you observe?	water vapour.			
		It is in state?	Grasons state.			
		From the above statement what do you observe?	There is change in the states of water.			
		In how many states the water exists?	3 states.			
		What are they?	Solid, liquid, gas.			

Is there any substance which exists in all the three states

Ans.

Tell me some objects which you found around us with its state.

bench – solid
wall – solid
milk – liquid
CO_2 – gas.

Is petrol and milk exist in liquid state.?

Yes.

are there properties some

No.

Cumulative Activity.

Summarisation: Today we learnt about the topic "matter, states and its properties".

Recapitulation:

① How is the shape of volume of solids.

② why the shape of liquid is not definite.

③ what is liquid?

Home assignment:

Observe by taking different utilities in your home by pouring water and identify its shape and volume.

Lesson plane- 14

Name of the student teacher: Sujoy Barman

Roll no :

class : IX

Subject : Physical Science

Unit : Air, winds and cyclone.

Topic : wind and cyclones.

time : 45 mins.

School :

Previous knowledge Assumed: Pupil already know about air, air pressure.

Reference books: ① 9th class text book of A.P
② Methodology: New era publication.

Teaching aids: Blackboard, chalk, duster, pointer, chart etc.

Teaching method: Lecture and demonstration method.

Teaching learning points: - Uneven heating at equator and poles.
- Uneven heating of land and water.
- Cyclone.

Introductory Activity.

Content	Teachers' activity	Pupils' activity	B.B.W	T.L.M
Introduction: wind and cyclones	Good morning children. - what are called moving - what are called fast moving airs / storms on earth. — So what will we learn to day.	Good morning sir. - wind. - Cyclone - wind and cyclone.		

Announcement of the topic: I will say "So, we are going to learn about wind and cyclone" and fill the topic column on the blackboard.

Developmentory activity.

Content-analysis	Specification and objectives	Teachers' activity	Students activity	BBW	TLM	Evaluation
The ease of winds in areas near large water bodies includes sea and oceans uneven heating taken place on the surface of the earth. There are no. of reasons for this.	Pupil understand uneven heating on the earth.	what about wind on the other parts of the earth.	different areas have different temperature.			
		using different areas have different temperature				
	of observing		There are nos. of reasons.			
	Pupil will understand about the uneven distribution of sunlight in the earth.	Do all the region of earth gets equal sunlight	No.			

	A/ reason	Do winds cause harm	Yes			
		How it causes	- Due to cyclone so many people are affected.			
Cyclone is a form of violent storm on earth people call these storms by different names such as typhoons hurricanes etc depending on where they occur.	Pupil will understand about cyclones	- Many which period of time causes cycle.	- Due to cyclone so many people are affected.			
Tropical cyclones are like giant engine.	K/ recall	- what are the names of storms ?	- May - June - Oct - November - Typhoons - Hurricanes			
		- How we can have the knowledge of cyclone.	- By the help of T.V news-papers radio.			

(11)

Cumulative activity.

Summarization: So we learnt about wind and cyclones and its effect-

Recapitulation:

- Uneven heating on the earth causes wind-current.
- Fast moving wind may cause cyclone.
- Cyclone may also caused due to presence of different

Assignment:

→ How will you help your neighbour in case cyclone approches your village / town.

→ Write different types of cyclone.

→ The centre of cycle is called ___ ?

K. Leelavathi
HEAD MASTER
Trinity (E.M) High School
DARSI. 523247. Prakasam Dt.

Lesson plan – 15

Name of the student-teacher : Sujoy Barmem

Roll no :

class : IX

Unit : Physical Science

Topic : Earthquake

Time : 45 mins.

School :

Previous knowledge: Pupil will have the knowledge about earthquake.

Reference books: (i) 9th class text book of A.P
(ii). Methodology - Physical Science CBSE book.

Teaching aids: Black board, chalk, dusters, charts, picture, pointer etc.

Method of teaching: Lecture and demonestration method.

Teaching learning method:
(i) About Earthquake
(ii) Causes of Earthquake
(iii) Preventions / measures for earthquake

Major instructional objectives:

Terms - Coast, Earthquake, discharge, sismograph, Richter-sclale, magnitude seismic hazard map, fault zone..

Facts: Earthquake is a natural phenomenon which mere not able to predict.

knowledge: For pupil aequire the knowledge of facts, formula etc by lesson.

Specification:

① Recall - The pupil recall the terms, facts. etc in the lesson

Recognition - The pupil can recognise the facts that earthquake occurs all over the world.

Understanding: The pupil understands the earthquakes.

(u3)

Specification:

① Gives examples: The pupil can give examples of the areas like Kasmir western, Central, Himalayas etc.

② Compares:- The pupil can compare earthquake from other natural phenomena like lightning, flood etc.

③ Explains: The pupil explain about earthquake in his own words.

④ Identification: Pupil can identify the seismic zone areas on the map.

Application: Pupil can apply the knowledge in the new situations e.g He can produce himself by following the precautionns measures where earthquake occurs.

Specification:

Give examples: The pupil can give examples of the areas like Kasmir western, central Himalaya.

Analysis: Pupil can analyse that earthquake is caused by the distance of the earthquake.

Devices: The pupil can make the model device of seismograph as seismographe.

selects: Pupil will select seismograph to measure the seismic causes.

Predicts: The pupil can predict the symptones of an earthquake.

Give reasons: Pupil can give reasons for earthquake - cause.

Establishes relation: The pupil can establishes relations.

e.g. The pupil can establish relation between the inrase in magnitude and increase in destructive energy.

Skills: The pupil develops many skills as follows.

(v) Observational skill.

(a) Drawing skill.

(w) Reporting skill.

(4)

Content analysis	Objective	Teachers' activity	Student activity	B.B.W	TLM
Introduction: Testing previous knowledge and motivation		Good morning children How many planets are there in our solar systems. - In which planet you live? - Name two natural calamities - what happens when there is sudden shattering of the earth.? Do you know what are these called ?	Goood morning - 8 planets. - Earth. Flood, Tsunami earthquake. All building trees will and down. Earthquake		

Announcement of the topic: Then I will declare the topic that today we are going learn about 'Earthquake' and write it at the topic column of the black-board.

Developmentary activity.

Content analysis	Objective	Teachers' activity	Pupils activity	B.B.W	TLM	Evaluation
concept - ① - In Earthquake is a sudden shaking or trembling of the earth lasting for a very short period of time. It is caused by a disturbance deep inside. The earth's crust. There is a myth that the earth is balanced on the horn of the bull and when the bull shifts it to the other the earthquake occurs The cause - The cause dangerous to the buildings, bridges, dams people etc.	K Recall	An earthquake is a sudden shaking or the trembling of the earth lasting for a very short period of time. what is an earthquake	- Tell in your own words	Earth quake	Chart.	
	U gave reason	Do you know why these earthquake occur?	No			
	K Recall	It is caused by a disturbance deep inside the earth crust. what is the reason? Do you know where earthquake occurs?				

(45)

A major Tsunami occurred in the Indian ocean on 26th 'med 2004. Tremours are caused due to the distarbance deep down inside protion of the upper most layer of the earth.	U Predict- Ay estimates A cause & effect.	Earthquake occurs all over the earth. * All over the earth mean? * what will be damaged by earthquake * Do you know why flood Tsunami occurs. The earthquake causes tsunami under sea. What is the reason? A major Tsunami occured in ~~Inden~~ Indian Ocean. On 26th dec. 2004.	Earthquake else. - Building - humanigh. - No. Indian ocean on 26th dec 2004.	

Cumulative activity.

Summarrization: So, today we learn about earthquake and the terms related to this ~~note~~ natural calamities.

Recaptulation:

- Terms
  - Crust.
  - Volcano.
  - Lava
  - Seismic point.

Assignment: Describe the causes of earthquake.

- List the destribution that takes place due to earthquake.

(16)

Lesson plan - 16

Name of the student teacher: Sujoy Barman

Roll no :

class : IX.

Subject : Physical Science.

Unit : Air and its construction.

Topic : Components of air.

Time : 45 mins.

School :

Previous knowledge: Students have already known the knowledge of components of air.

Reference books: ① Content - 9th class text books of A.P.
② Methodology — New era publication.

Teaching aids: black-board, chalk piece, duster, pointer, chart, ballon hand-fan etc.

Teaching method: Lecture-cum demonstration method.

Teaching learning points: ① Air is odourless and is a mixture.
② Composition of air.
③ Discovery of Carbon-di-Oxide, Oxygen.

(af)

Introductory Activity.

Content-	Objective	Teachers' activity	Pupils' activity	B.B.W	T.L.M
Introduction:		-(Bursting the ballon) - what did you find ? - Could you see air ? - where is air ?	- Air comes out- from the ballon - No - Everywhere.		

Announcement of the topic: Then I will announce the topic and write it on the black-board.

Lesson

Developmentary activity.

content	Objectives and specifications	Teachers' activity	Pupils' activity	B.B.W	T.L.M	Evaluation
	K/ Recall will say the properties of air	- what is properties of air.? - where is it ? - what are the components of air ? what are the uses of air	It is invisible - It has mass. Everywhere various gas - balloon - Blowing - fire, lighting	has mass if it is a matter. - Everywhere - Oxygen - Nitrogen - Carbon-di-oxide - Argon. exiptor etc.		

Cumulative activity:

Summarization: Today we have learnt about air and of its properties.

Recapitulation: Air is around.

Air is a mixture of many gas.

Assignment: write the composition of air.

Name the Things for which air used?

Lesson plan - 17.

Name of the student-teacher : Sujoy Barman

Roll no :

class : IX

Subject : Physical Science

Topic : Parallel circuit.

Time : 45 mins.

School :

(19)

Previous knowledge: Pupils have already the knowledge of bulb.

Reference books: ① IX class text books of A.P.

② Methodology: New era publication.

Teaching aids: Black-board, chalk, duster, chart, pointer etc.

Teaching method: Lecture-demonstration method.

Teaching learning points: ① Wire

+ ve terminal

- ve terminal

- bulb.

Objectives: - Pupil will learn about the terminals.

- Distinguish terminal.
- Can connect full in different connections.

Specification:

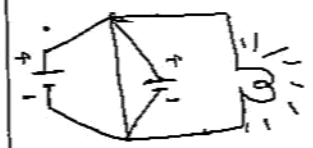
- Learner can connect bulb in parallel series.
- Tell the +ve and -ve terminal of a cell.
- Arrange electrical equipment in order.

Inductive activity.

Content		Teachers' activity	Pupils' activity	B.B.W	TLM
Parallel connection of bulbs.		Good morning students - In previous class what we have learnt ? , what are this showing bulbs. - Can you connect them in parallel series	Good morning sir. - Parallel series connection. - bulb. - No.		

Announcement of the topic: Then I will declare the topic that " today we are going to learn about the parallel connection of bulb and write the topic on black board.

Developmentary activity.

Content-	Objectives and specification	Teachers activity	Pupils activity	B.B.W	T.A.M	Evaluation
There are parallel content- the +ve and the -ve terminal of a battery by using 'Cu' wire have to connect to the bulb. It glow brightly - connecting bulbs in series and parallel.	Y/classification Skill / know Pupil understand and the knowledge of connecting bulbs in series and parallel.	- Can you classify between series and parallel connection. - Draw the symbol and say ~~diagram~~ the circuit diagram. - How many cells can be connected - What is the base that the bulbs are connected.	- In series falls remain in line but in parallel they remain parallel to each other.  - No found. - Copper wire.	..	.	

(51)

	series	what is the use of connecting bulbs in series	In the series connection any one bulb is of working then remaining bulbs will not glow. - wire consumption is less.	series connection
"Take three bulbs, connect three bulbs in series with en-wire. The +ve and -ve ends can be connected to cell as connect bulbs in parallel ends of the en-wire connect to the cell.	A/ Lesson	what is the use of bulbs is connected in parallel.	-In parallel connection we can find easily the bulb when was damaged can remove.	

Cumulative activity.

Generalisation: Today we have learnt about the parallel connection of bulbs.

Recaptulation: Parallel connection.

Series connection.

Assignment: Write the use of parallel and series connection in our day today life.

Lesson plan – 18.

Name of the student teacher : Sujoy Barman

Roll no :

Subject : Physical Science

class : IX.

Topic : Types of mixtures

Duration : 45 mins.

School :

Previous knowledge: Pupil have already the knowledge of—

- Definition of mixture
- Properties of mixture.

Reference books: Standard IX text book of A.P. govt.

Methodology - New Era Publication.

Teaching aids: Black board, chalk, duster, chart, pointer etc.

Teaching method: Production method.

Points of teaching-learning: - Properties of mixture.

- Classification of mixture.

Objectives and specifications.

Objectives:

① Knowledge: The student acquire the knowledge on the concept of finding mixture.

Specification: The pupil

① Recall the definition of mixture

② Properties of mixture.

② Understanding: The student understand the concept of finding mixture.

Specification: The pupil will

ⓐ Give examples of mixtures.

ⓑ Give examples of types of mixture.

③ Application: The student apply the knowledge on the concept of mixtures finding.

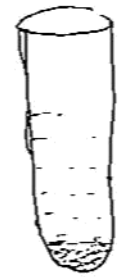
Skill: The pupil acquire various skill regarding with teaching points.

Introductory activity.

Content	Teachers' activity	Pupils' activity	B.B.W	T.L.M
Introduction and Previous knowledge test.	Good morning children - What did we have learnt yesterday. - Are all mixtures same?. - Do you know human types of mixtures are there?	Good morning sir. - About mixtures. - No. - No.		

Announcement of the topic: Then I will announce the topic that "Today we are going to learn about different types of mixtures and then write topic on board - Board.

Developmentary activity.

Content	Objective	Teachers' activity	Pupils activity	T.L.M	B.B.W	Evaluation
		Take two test tube. Full one test tube with water and other with kerosine. Add one tea-spoon of salts in both the test tube and stone them. What do you notice in the test tube In this case salt dissolved and disappeared	- Solid mixed do not seen.	 water + salt.  Kerosine + salt.		

A/ observation skill.	Such types of mixtures are called Homogeneous mixtures.		
	what do you see in the 2nd test-tube.	- kerosine and water.	
	what did you conclude from it.	- it is not homogeneous.	
R/ recall	- Give examples of homogeneous mixture.	- air	
		- Sugar-water solution.	
U/ Recall	- Give some examples of heterogeneous mixture.	- Sand + iron freely water mixed.	

Cumulative activity

- Generalisation: Today we learnt about the topic reversible and irreversible reactions.

Recaptulation:

(i) Reversible reactions.

(ii) irreversible reactions.

(iii) Symbol used in reaction.

Assignment: Differentiate between reversible and irreversible reaction.

- Give 5 examples of each type of reaction.

Lesson plan – 19.

Name of the student teacher: Sujoy Barman

Subject: Physical Science.

class : IX.

Unit: Rates of reaction.

Topic : Reversible and irreversible reaction.

Time: 45 min.

School :

Previous knowledge assumed – Pupils have already the knowledge of different types of reactions.

Books referent: ① Content – standard IX text book.
② Methodology – New Era publication.

Teaching aids: Different types of reactions.

Teaching method: Lecture cum demonestration method.

Objectives and specification.

Knowledge: Students will get the knowledge of reversible and irreversible reactions.

Specification: Recognition: Students recognise the irreversible and reversible reaction.

Understanding: Student will understand the reactions.

Specification: Compares: Student compare the words of reversible and irreversible reactions.

Applications: Student apply the reversible and irreversible reaction in chemistry.

Generalisation: Student generalise the reversible and irreversible reaction.

Introductory activity.

Content	Teachers' activity	Pupils' activity	B.B.W	T.L.M
Previous knowledge	- Good morning children - what did you learn yesterday. - If you go towards east 5 step & then come back 5 steps towards what would you call. - In case of mixture the uses also given thing.	Good morning sir. - About different kinds of reactions. Reverse · movin.		

Announcement of topic: So, I will announce the topic and fill in the topic column.

Developmentary activity.

Content-	objectives and Specification	Teachers' activity	Pupil activity	T.L.M	B.B.W	Evaluati
	K/ of reaction recall.	Give some examples of reactions chemical.	- migeston of food. - Burning of people.			
		If you cut a paper any thing change takes place	No.			
		- If you fornit -	Yes			
		- what is the change	- A new Thing obtaines.			
		will you get back the paper.	- No			
		what did you find?	- No coming back of original thing.			

Cumulative activity.

Generalisation: Today we learnt about the topic. reversible and irreversible reactions.

Recapitulation;

(i) Reversible reactions.
(ii) Irreversible reaction.
(iii) Symbolised in reaction.

Assignment: Differentiate between reversible and irreversible reaction.

- Give 5 examples of each type of reaction.

Lesson plan - 20.

Name of the student-teacher: Sujoy Barman

Subject: Physical Science.

class: IX.

Unit: Diffusion of Liquids.

Topic: Matter arround us.

Duration: 45 min.

School:

Previous knowledge: Students have already the knowledge of

① Properties of solids.

② properties of liquids.

③ Properties of gases.

Reference books: ① Content - class text book.

② Methodology - New Era publication.

Teaching aids: Black-board, chalk, duster, pointer etc.

Teaching method: Lecture cum demonstration method.

Point of teaching: Liquids, diffuses, diffusion.

Objective and specification.

Objectives.

① **knowledge:** The pupil will acquire the knowledge of diffusion.

Specification: ⓘ Recalls the structure of liquid.

ⓘⓘ Recalls properties of liquid.

ⓘⓘ **Application:** Pupil will apply the knowledge of diffusion of liquids.

Specification: Pupil apply diffusion process in day to day life.

ⓘⓘⓘ **Understand:** Pupil will understand the knowledge of diffusion.

Introductory activity

Content-	Teachers' activity	Pupils' activity	B.B.W	T.L.M.
Introduction.	Good morning children - Take water and milk mix it. - what did you find. - Can you separately seen then.	Good morning Sir. water mixed in milk - No.		

Announcement of topic: Then I will announce the topic and write it on 'black-board.

Developmentary activity.

Content	objectives and specification	Teachers' activity	Pupils' activity	B.B.W	T.L.M	Evaluation
Take some of breaker & fill it with water use a dropen and put a drop of blue or red ink to the solution slowly.	S/Recalls. The properties of liquid.	Observe the liquids diffussion process. Now feel, what is diffussion. We find the diffusion of liquid liquids also diffuses.	The movement of airvapour of scent smoke, is known diffussion.			

		what- did you observe after adding the ink drop or $KMnO_4$ drop.	They solubly mixed with water.
	s/ Recall the properties of gases.	You can observe that liquids also diffuse into each other like gases.	not - constant - depend upon - amount of water.
		How much times does it take to spread everthy throughout water.	- Seize of container.

Co-Curricular Activity.

Generalisation: Today we have learnt about diffusion process in liquids.

Recapitulation: Diffusion in gases.

Diffusion in liquids.

Diffusion and properties of gases and liquids.

Assignment:

(i) Define diffusion.

(ii) How will you explain the diffusion in liquid.

(iii) Draw and show the diffusion in liquids.